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## sPHENIX measurement of $dE_T/d\eta$ in Au+Au Collisions at 200 GeV

The transverse energy in heavy ion collisions is one of the key observables characterizing global properties of the quark-gluon plasma (QGP). The transverse energy per unit pseudorapidity ( $dE_T/d\eta$ ) probes the energy carried by the medium along the longitudinal direction, providing essential information related to the initial geometry propagated through subsequent hydrodynamic evolution of the QGP. This poster reports measurements of  $dE_T/d\eta$  from the sPHENIX experiment using the Relativistic Heavy Ion Collider's (RHIC) 2024 dataset of Au+Au collisions at 200 GeV. These results are the first  $dE_T/d\eta$  measurements at RHIC energies from a hadronic calorimeter with full azimuthal coverage. Results are compared to previous measurements of  $dE_T/d\eta$  for 200 GeV Au+Au collisions at RHIC made with only electromagnetic calorimetry. Furthermore, these results are presented in various centrality intervals and compared to the latest theoretical models, which can impose strong constraints on centrality-dependent particle production and initial conditions of the collisions at RHIC energies.

### Category

Experiment

### Collaboration (if applicable)

sPHENIX

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