

## Measurement of charged hadron $R_{AA}$ at high $p_T$ in PbPb collisions at $\sqrt{s}=2.76\text{TeV}$ with CMS

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The nuclear modification factor  $R_{AA}$  is one of the key signatures for the energy loss of fast partons traversing a QCD medium. Charged particle transverse momentum ( $p_T$ ) spectra have been measured by CMS for pp and PbPb collisions at the same collision energy per nucleon pairs,  $\sqrt{s_{(NN)}}=2.76$  TeV, corresponding to integrated luminosities of 230 nb<sup>-1</sup> and 150 ub<sup>-1</sup>, respectively. Calorimeter-based high-transverse-energy jet triggers are employed to enhance the statistical reach of the high- $p_T$  measurements. The pp results are compared to various generator tunes and also to an empirical scaling of different collision energies with  $x_T=2p_T/\sqrt{s}$  over the  $p_T$  range up to 100 GeV/c. We have obtained  $R_{AA}$  in bins of collision centrality for the PbPb data sample dividing by the measured pp reference spectrum. In the range  $p_T = 5\text{-}10$  GeV/c, the charged particle yield in the most central PbPb collisions is suppressed by up to a factor of 7. At higher  $p_T$ , this suppression is significantly reduced, approaching roughly a factor of 2 for particles with  $p_T = 40 - 100$  GeV/c.

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