Hot Quarks 2014



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Jet measurements in Heavy Ion collisions with CMS

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One of the signatures of the strongly interacting medium produced in heavy ion collisions is the suppression of high-transverse momentum $(p_{\rm T})$ jets or so called 'quenched jets'. In this talk, we present detailed measurements of nuclear modification factors and energy flow of quenched jets with the CMS detector. Those new results extend previous measurements to large angle with respect to the quenched jets and extend the transverse momentum range to lower $p_{\rm T}$. We use the high statistics pp, pPb and PbPb data taken in 2011-13 employing a new data-driven method to estimate the underlying event level from the forward calorimeter energy distribution, taking into account possible flow modulation. We will also look at the flavor dependence of energy loss of jets by looking at heavy flavor tagged b-jets in these systems.

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