

BEACH 2010 - IX International Conference on Hyperons, Charm and Beauty Hadrons



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Charm and Beauty production at RHIC

We present results on charm and beauty production at RHIC, in p+p, d+Au and A+A collisions at $\sqrt{s_{NN}}=200$ GeV, and compare them to model calculations. We focus on two particular issues, jet quenching and quarkonia. Anomalous energy loss (jet quenching) of quarks passing through the dense and hot matter build in heavy ion collisions is one of the outstanding discoveries made at RHIC, allowing for an estimate of the initial density. Furthermore, color screening of hidden charm and beauty states is a key signature of the QCD phase transition, allowing an estimate of the initial temperature. We present results on the flavour (u,d,s,c,b) dependence of jet quenching. Heavy flavour production in A+A as compared to p+p collisions will be discussed for open and hidden charm.

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