J/Ψ Suppression in a Thermal Model

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Abstract

We study J/Ψ suppression in Pb-Pb 160GeV/A collisions at CERN-SPS. Using effective lagrangians, we calculate J/Ψ + h cross sections to be of the order of a few *mb*. To investigate whether such hadronic cross sections, including medium effects, may account for the "anomalous" J/Ψ suppression observed at CERN, we describe the dynamics of the collision by an expanding fireball. We study the evolution of the system with or without phase transition and determine the J/Ψ suppression as a function of the centrality of the collision. Important features such as finite size effects and formation time effects are included. This model also allows us to further study J/Ψ suppression at RHIC.

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