QPT 2019

Enshi, China

Contribution ID: **55** Type: **not specified**

quantitative analysis of charmonium eigenstates in the expanding QGP

Summary

In this talk, I will present the quantitative calculations of charmonium different states (J/ψ,$\psi(2S)$) evolving in the expanding medium. The hot medium effects can dissociate charmonia and provide phase space to generate new charmonia which will carry QGP collective flow information. Besides, the additional mechanism of photoproduction from electromagnetic fields generated by fast moving nuclei can also generate charmonia. Both hadro- and photo- production and b-flavor hadron decay will be discussed completely in charmonium observables.

The quantum approach which treats bound charmonium as an open quantum system in QGP will also be introduced based on Stochastic-Schrodinger-Equation. The hot medium effects will affect the internal evolutions of charmonium which may have measurable effects.

Primary author: CHEN, Baoyi (Tianjin University)

Co-author: Prof. ZHUANG, Pengfei (Tsinghua University)

Presenter: CHEN, Baoyi (Tianjin University)