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PHENIX results on Heavy Flavor Production

Thursday 8 September 2022 15:50 (20 minutes)

Heavy flavor and quarkonia production is a powerful tool to study the properties of the Quark Gluon Plasma (QGP). Heavy quarks lose their energies via final state interactions in the QGP. The magnitude of the energy losses is expected to depend on their mass. The elliptic flow of charm and bottom also provide a medium coupling of heavy flavor with the QGP. The suppressions of quarkonia production is a clear signal of the final state effect in QGP. The comparison of the nuclear modification in p/d+A and A+A enables to disentangle the cold nuclear effect and hot QGP effect. PHENIX measured the nuclear modification of the open heavy flavor and quarkonia production in small and large collision system with mid- and forward rapidity.

In this talk, the latest results of heavy flavor and quarkonia production in different collision systems are presented, and their nuclear modifications as function of transverse momentum, centrality, and rapidity are discussed.

Is this abstract from experiment?

Yes

Name of experiment and experimental site

PHENIX experiment

Is the speaker for that presentation defined?

Yes

Details

Speaker's name is Dr. Takashi Hachiya (myself). The institution is Nara Women's University, Japan

Internet talk

Yes

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