



XLVII International Symposium on
Multiparticle Dynamics (ISMD2017)

September 11-15, 2017, Tlaxcala City, Mexico

Contribution ID : 31

Type : **not specified**

Bottomonia physics at RHIC and LHC energies

Monday, 11 September 2017 09:25 (0:25)

Content

The suppression of Y mesons in the hot quark-gluon medium (QGP) versus reduced feed-down is investigated at energies reached at the Relativistic Heavy Ion Collider RHIC and the Large Hadron Collider LHC. Our centrality- and p_T -dependent model encompasses screening, collisional damping and gluodissociation in the QGP.

For the $Y(1S)$ ground state it is in agreement with both STAR and CMS data provided the relativistic Doppler effect and the reduced feed-down from higher states are properly considered. At both energies, most of the $Y(1S)$ suppression is found to be due to reduced feed-down, whereas most of the $Y(2S)$ suppression is caused by hot-medium effects. The importance of the latter increases with energy. Effects of the strong magnetic fields are shown to be small due to the short duration and the reduced magnitude in the medium. The p_T -dependence is flat as a consequence of the relativistic Doppler effect and reduced feed-down. Results for PbPb at 5.02 TeV are predicted and compared with recent LHC run 2 preliminary data.

[1] J. Hoelck, F. Nendzig and G. Wolschin, Phys. Rev. C 95, 024905 (2017)

Session

Multiparticle correlations and fluctuations

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Session Classification : Multiparticle correlations and fluctuations: From small to large systems (I)