



Contribution ID: 77

Type: **not specified**

X(3872) production in heavy ion collisions

Thursday, 1 September 2016 17:00 (20 minutes)

This talk will be based on the e-print “X(3872) production and absorption in a hot hadron gas”, arXiv:1604.07716.

Summary

We calculate the time evolution of the X(3872) abundance in the hot hadron gas produced in the late stage of heavy ion collisions. We use effective field Lagrangians to obtain the production and dissociation cross sections. We include anomalous couplings which were neglected in previous calculations. With these new terms the X(3872) interaction cross sections are much larger than those found in previous works. Using these cross sections as input in rate equations, we conclude that during the expansion and cooling of the hadronic gas, the number of X(3872), originally produced at the end of the mixed QGP/hadron gas phase, is reduced by a factor of 4.

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Session Classification: Section C

Track Classification: Section C: Heavy Quarks