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Computation of the rates of bottomonium dissociation and recombination in heavy-ion collisions at 5.02 TeV.

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In the medium of relativistic heavy-ion collisions, dissociation of the
quarkonium and their survival have been studied to understand the properties of Quark Gluon Plasma (QGP).
The coupled rates of dissociation and recombination reactions in QGP are commonly solved with
Boltzmann transport equation in which the formation and dissociation
reactions compete. Since the dissociation of newly formed bound-states
are not accounted in the Boltzmann equation, a framework of decoupled rates is developed to assess the combined effect of gluon-induced
dissociation and recombination together with color screening on bottomonium production at center of mass energy ($\sqrt{s}$) = 5.02 TeV
in heavy-ion collisions (Pb+Pb ions). To calculate the recombination
rate equation, we have employed an effective method of Bateman solution which makes sure the regeneration along with the dissociation of
the recombined bottomonium in the QGP medium. The modifications
of bottomonium have been estimated in an inflating QGP with the constraints agreeing with the dynamics of Pb+Pb collision events at LHC.

Is this abstract from experiment?

No

Name of experiment and experimental site

N/A

Is the speaker for that presentation defined?

Yes

Details

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Internet talk

Maybe

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