

## Volume Effect of Bound States in Quark-Gluon Plasma

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(Received: 2006-2-13; Revised: )

**Abstract:** Bound states, such as  $qq$  and  $q\bar{q}$ , may exist in quark-gluon plasma. As the system is at high density, the volume of the bound states may evoke a reduction in the phase space. We introduce an extended bag model to investigate qualitatively the volume effect on the properties of the system. We find a limit temperature where the bound states start to be completely melted.

**PACS:** 12.38.Mh, 25.75.-q

**Key words:** QGP, equation of state, diquark, bag model, volume effect

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