

B_0 and B_{s0} mesons in hot and dense asymmetric nuclear medium

Friday, July 6, 2018 7:15 PM (15 minutes)

We investigate the in-medium masses and decay constants of scalar B_0^+ , B_0^- and B_{s0} mesons in hot and dense isospin asymmetric nuclear medium, using QCD sum rule approach and chiral SU(3) model. In chiral SU(3) model, using mean field approximation, we calculate the in-medium values of scalar fields σ , ζ , δ and χ . Further, the light quark condensates and gluon condensates needed for the QCD sum rules are expressed in terms of these scalar fields σ , ζ , δ and χ . Furthermore, in-medium values of these condensates are then used in QCD sum rules in order to observe in-medium masses and decay constants of above mentioned mesons. The results of the present investigation may be helpful in order to understand possible outcomes of the future heavy ion collision experiments like CBM and PANDA, at GSI Germany.

Primary authors: Mr CHHABRA, Rahul (National Institute of Technology, Jalandhar); Dr KUMAR, Arvind (National Institute of Technology, Jalandhar)

Presenter: Mr CHHABRA, Rahul (National Institute of Technology, Jalandhar)

Session Classification: POSTER

Track Classification: Heavy Ions