Vector D and B mesons in asymmetric and hot dense medium.

RAHUL CHHABRA, ARVIND KUMAR, Dr.B.R Ambedkar National Institute of Technology — We calculate the effect of density and temperature of isospin asymmetric non-strange medium on the shift in masses and decay constants of vector D and B mesons using chiral SU(3) model and QCD sum rule approach. In the present investigation the values of quark and gluon condensates are calculated from the chiral SU(3) model and these condensates are further used as input in the QCD Sum rule framework. These condensates are further used to calculate the in medium masses and decay constants of vector D and B mesons. These in medium properties of vector D and B mesons are helpful to understand the experimental observables of the experiments like CBM and PANDA under FAIR project at GSI, Germany. The results which are observed in present work are also compared with the previous predictions.

Rahul Chhabra
Dr.B.R Ambedkar National Institute of Technology

Date submitted: 10 Jan 2016