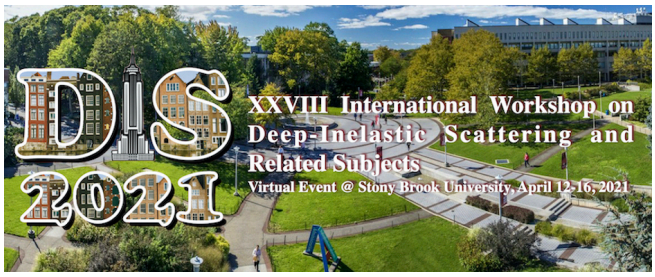

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Pentaquarks Θ^+ in hot asymmetric nuclear matter: $nK^+\pi^0$ and $pK^0\pi^0$ structure

We present the in-medium modification of pentaquark , Θ^+, using chiral SU(3) hadronic mean field model in hot and dense asymmetric nuclear matter. The in-medium properties of hadrons within the chiral model are investigated through the modification of scalar fields σ, ζ and δ and the vector fields ω and ρ. The effects of finite temperature and density of the medium are evaluated considering Θ^+ as $nK^+\pi^0$ and $pK^0\pi^0$ structure. For the in-medium masses of kaons K^+ and K^0, which are used as input in calculations of effective mass of Θ^+, we employ chiral SU(3) model and chiral perturbation theory in asymmetric nuclear matter and a comparison of results is presented.

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