

Effect of light flavor mass asymmetry on hot and dense nuclear matter

We present a study of the 1+1 flavor system of strongly interacting matter in terms of the Polyakov–Nambu–Jona-Lasinio model. We find that though the small isospin symmetry breaking brought in through unequal light quark masses is too small to affect the thermodynamics of the system in general, it may have significant effect in baryon-isospin correlations and have a measurable impact in heavy-ion collision experiments.

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