

Electromagnetic conductivity of dense quark-gluon plasma

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In this report we present the results on the study of the electromagnetic conductivity in dense quark-gluon plasma obtained within lattice simulations with $N_f=2+1$ dynamical quarks. We employ stout improved rooted staggered quarks at the physical point and the tree-level Symanzik improved gauge action. The simulations are performed at imaginary baryon chemical potential, and the Tikhonov regularisation method is used to extract the conductivity from current-current correlators. Our results indicate an increase of QGP electromagnetic conductivity with real baryon density, and this dependence is quite strong.

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