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Electromagnetic conductivity of quark-gluon plasma at finite baryon chemical potential

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In this talk we present our 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 chemical potential. To reconstruct electromagnetic conductivity from current-current correlators, we employ the Tikhonov regularisation method as well as the modified Backus-Gilbert method, computing the convolution of the spectral density with the target function. Our study indicates that electromagnetic conductivity of quark-gluon plasma rapidly grows with the real baryon density.

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