

Holographic Plasmino in Strongly Coupled Medium

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We consider the self-energy of strongly interacting fermions in the medium using gauge/gravity duality of D4/D8 system. We study the mass generation of the thermal and/or dense medium and the collective excitations including plasmino, by considering the spectral function of fermion and its dispersion relation. The result is compared with those of the hard thermal loop method. For strongly interacting fermions in deconfined phase, there is no thermal mass generation for zero density; the plasmino excitation in confined system develops only in a window of density, which are different from the perturbative field theory result for weakly interacting system.

Keywords

plasmino, self-energy, strongly interacting

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