General Relativity and Quantum Cosmology

Holographic superconductors in the Born-Infeld electrodynamics

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We study the effects of the Born-Infeld electrodynamics on the holographic superconductors in the background of a Schwarzschild AdS black hole spacetime. We find that the presence of Born-Infeld scale parameter decreases the critical temperature and the ratio of the gap frequency in conductivity to the critical temperature for the condensates. Our results means that it is harder for the scalar condensation to form in the Born-Infeld electrodynamics.

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