

Modified Dust-Lower-Hybrid Waves In Quantum Plasma

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Abstract

Dust-lower-hybrid waves in quantum plasma have been studied. The dispersion relation of the dust-lower-hybrid wave has been examined using the quantum hydrodynamic model of plasma in an ultra-cold Fermi dusty plasma in the presence of a uniform external magnetic field. Graphical analysis shows that the electron Fermi temperature effect and the quantum corrections give rise to significant effects on the dust-lower-hybrid wave of the magnetized quantum dusty plasma.

Keywords: Magneto plasma, wavelength, microelectronics, hydrodynamics, quantum mechanics

