

Jeans instability is examined in detail in uniform dusty magnetoplasmas taking care of collisional and non-zero finite thermal effects in addition to the quantum characteristics arising through the Bohm potential and the Fermi degenerate pressure using the quantum hydrodynamic model of plasmas. It is found that the presence of the dust-lower-hybrid wave, collisional effects of plasma species, thermal effects of electrons, and the quantum mechanical effects of electrons have significance over the Jeans instability. Here, we have pointed out a new class of dissipative instability in quantum plasma regime. © 2014 AIP Publishing LLC. [<http://dx.doi.org/10.1063/1.4895664>]