Documents

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Instability of acoustic surface waves on warm dusty plasma

(2011) *Advanced Studies in Theoretical Physics*, 5 (9-12), pp. 585-593.

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Abstract
Instability and propagation of dust acoustic surface waves on a thin warm dusty plasma slab was investigated in our work. Upon conclusion it was found that dispersion relation for the waves is differ significantly from that of cold plasmas and the dispersion increases with increase of the warmness of dusty plasma (ω2 /kz2)α(Vtd2). The permittivity and instability of dusty plasma was calculated and it was clear that it is more affected by the warmness of dusty plasma while the permittivity ε=[1-(ωpd2/Htdω2)] decreases by increase of the warmness of dusty plasma, Htd=1-(3kz2Vtd2/ω2).

Author Keywords
Dispersion surface waves; Instability; Permittivity of Dust Plasma; Warm Dust Plasma

Document Type: Article
Source: Scopus