

Non-Thermal and Dust Charge Effects on Surface Ion Waves in Semi-Bound Lorentzian Plasmas

Jae-Hoon Song^a and Young-Dae Jung^{a,b}

^a Department of Applied Physics, Hanyang University, Ansan, Kyunggi-Do 426-791, South Korea

^b Department of Bio-Nanotechnology, Hanyang University, Ansan, Kyunggi-Do 426-791, South Korea

Reprint requests to Prof. Y.-D. J.; E-mail: ydjung@hanyang.ac.kr

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The non-thermal and dust charge effects on a surface electrostatic ion plasma wave are investigated in a semi-bound magnetized dusty Lorentzian plasma. The results show that the phase velocity of the surface wave with negatively charged dust grains is greater than that with positively charged dust grains or that with neutral dust grains. It is also found that the phase velocity increases with increasing the spectral index of the plasma. For the long wavelength domain, however, the phase velocity of the surface wave is found to be almost independent of the spectral index.

Key words: Surface Ion Waves; Lorentzian Plasmas.