

# FLUCTUATIONS IN DUSTY PLASMAS: KINETIC DESCRIPTION AND NUMERICAL SIMULATION

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## S u m m a r y

The kinetic theory of electromagnetic fluctuations in dusty plasmas is developed on the basis of the microscopic description of the grain charging dynamics. The main difference of such a theory from that formulated with the use of a phenomenological assumption is that the effective charging cross-sections are replaced by the  $k$ -dependent quantities describing the electron and ion absorption by grains with regard for the influence of a plasma inhomogeneity on the fluxes of absorbing particles. The correlation function of grain charge fluctuations is calculated and compared with the result of numerical simulations.