

LONG-RANGE EFFECTIVE POTENTIALS  
OF GRAIN INTERACTIONS IN PLASMAS

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S u m m a r y

Analytical estimates of the effective potential of a dust particle embedded into a plasma are performed with regard for its charging by plasma current. The plasma dynamics is described within the drift-diffusion approximation. It is shown that the effective potential in the case under consideration manifests the Coulomb-like asymptotic behaviour. The approximate expressions for the electric grain charge and plasma particle distributions around a grain are derived and compared with the earlier obtained numerical solutions of the problem.