

ION DRAG FORCE ACTING ON AN ABSORBING BODY IN HIGHLY COLLISIONAL PLASMAS

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S u m m a r y

The force acting on a small absorbing body embedded in a highly collisional plasma with drifting ions is calculated using the linear response formalism. It is shown that the ion absorption introduces new physical effects leading to a drastic reduction of the force. The physical reasons for this reduction are explained. The importance of this result is briefly discussed, mostly in the context of complex (dusty) plasmas research, but it can be relevant to many other situations, ranging from astrophysics, thunderclouds, dust in fusion devices, colloidal suspensions, biological systems, etc.