

Abstract Submitted
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On the dynamics of dust grains with propeller-like features¹

SERGEI KRASHENINNIKOV, UCSD — In many cases (e.g. astrophysical plasma, fusion devices) dust grains can have very peculiar shapes, which are far from spherical. Recently it was shown that the dynamics of non-spherical grains in plasma has some rather distinct features. For example, being immersed in a plasma flow, such grains can exhibit “dithering” of their trajectory, which can be observed with fast cameras, although spatial resolution of these cameras does not allow resolve the grain themselves. However, available theoretical models describing the dynamics of non-spherical grain in plasma neglect possible propeller-like features of the grain. Here we present the result of theoretical study of the impact of propeller-like shape of the grain on it’s dynamics.

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