

Some approach diagnostic electric and kinetic parameters dusty plasma system

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Near the moon surface as a result of interaction with the electrons and ions of the surrounding plasma, as well as under the influence of solar radiation, dust particles acquire an electric charge and become one of the important components of the environment, significantly affecting its properties and dynamics [1]. In the experimental modeling of the near-surface exosphere of the Moon under laboratory conditions, an important condition is the diagnosis of the characteristics of the dusty plasma environment. Of course, the most popular is the visualization of the process, but to understand the changes taking place inside dusty plasma cloud for our experimental chamber we also is used the Langmuir probe and electro-induction grids, tubes or plates. However high voltage when we create dusty plasma and another source of noise have the bad influence during electric measure. Equally important is the use of piezodetectors as low-noise targets for measuring the pulses of the dust component of the lunar dusty plasma environment.

[1] Fortov V E, Ivlev A V, Khrapak S A *et al* 2005 *Phys. Rep.* **421** 1–103