

MODE SPLITTING IN THE BILAYER CRYSTAL IN BINARY COMPLEX PLASMA

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Structural and dynamical properties of a bilayer binary strongly coupled dusty plasma system are under investigation. The experiments were performed in a modified “Zyflex” plasma chamber designed for experiments in microgravity onboard the ISS. Micron-size particles of two different charge-to-mass ratio formed two horizontal layers with vertical alignment. Analysis of velocity fluctuation spectra permitted us obtaine the collective mode dispersion relations. Comparison with theoretical predictions shows an important role of wake-mediated attraction and non-reciprocal feature of interaction between the layers. This study was supported by Russian Science Foundation via Grant 20-12-00365.