

Abstract Submitted
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Interaction Forces Between Two Vertical Particles in a Complex Plasma JAY KONG, TRUELL HYDE, CASPER - Baylor University — In the complex plasma generated in a GEC reference cell, charged dust grains levitate above the powered electrode. Fast-moving ions in the plasma sheath generate wake fields, creating vertical particle chains where the interaction forces between each particle in the chain are generally different due to the wake-field effect. An attenuated oscillation method designed to examine these anisotropic interaction forces has been developed based on an experimental technique whereby dust particles are raised to a height Δh above their natural equilibrium employing an external DC bias. Removal of this DC bias causes the dust particles to oscillate with attenuated amplitude, eventually returning to their original equilibrium positions. The resulting oscillation spectrum displays features unique to the interaction between the particles. Recent experimental results will be presented.

Truell Hyde
CASPER - Baylor University

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