

Abstract Submitted
for the DPP10 Meeting of
The American Physical Society

Conducting Particles Within a Dusty Plasma JORGE CARMONA REYES, LORIN MATTHEWS, TRUELL HYDE, CASPER - Baylor University — The Yukawa interaction between charged grains within the two-dimensional horizontal layer formed in the sheath above the powered lower electrode in a GEC rf reference cell leads to the formation of disordered or ordered structures depending on whether short or long range ordering dominates as determined by the ratio of the particle's inter-particle potential energy to its average kinetic energy. Although this process has been examined in detail for melamine resin particles, conducting particles have not yet been fully investigated. In this work AU coated MF particles were observed, illuminated by a 80 mW diode laser. Observed behaviors will be discussed.

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Date submitted: 14 Jul 2010

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