Abstract Submitted for the TSF06 Meeting of The American Physical Society

The Relationship between the DC Bias and Debye Length in a Complex (Dusty) Plasma¹ JAMES CREEL, JIE KONG, TRUELL HYDE, Baylor University — Dust particle levitation height within the plasma sheath is known to be related to the background pressure, DC bias, and Debye length. A new experimental technique has been shown to yield the Debye length based on changes in particle levitation height due to an externally applied variable DC bias. This method for evaluation of the Debye length seems simpler to implement in some cases when compared to those methods currently in practice.

¹National Science Foundation Research Experience for Undergraduates

James Creel Baylor University

Date submitted: 18 Sep 2006

Electronic form version 1.4