Abstract Submitted for the DPP14 Meeting of The American Physical Society

Experimental and Simulation Studies on Dust Instabilities at the Microscopic Level KATHERINE PACHA, University of Iowa — Dust instabilities have been widely studied for many years in RF and DC discharge devices as well as using computer analysis. By using a direct simulation in conjunction with the experiment, the microscopic picture of the instabilities can be studied in more detail. This is particularly helpful when looking in detail at the turbulent structures that at edges of clouds and when looking into regions where dust is not as dense. These studies were looked at as a fluid and as a granular flow with surprising results.

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Date submitted: 11 Jul 2014

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