

Abstract Submitted
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Observation of dust jets due to a dust-discharge instability¹ SU-HYUN KIM, JONATHON R. HEINRICH, ROBERT L. MERLINO, University of Iowa — We have observed an instability that occurs in a DC anodic glow discharge dusty plasma when a floating plate with a 5 mm aperture was placed in front of the 4 cm diameter anode disk. The instability is characterized by a periodic quenching and re-ignition of the discharge at frequencies in the range of 2 to 6 Hz. When the discharge is quenched, the dust cloud is ejected from the aperture in the form of a jet at speeds on the order of the dust acoustic speed. The jet retracts back toward the aperture when the discharge is re-ignited. The phenomena was studied using video imaging of laser light scattered from the dust.

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