

Abstract Submitted
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Investigations of a ring shaped sheath using a dusty plasma¹

WILLIAM THEISEN, ANDREW KURTZ, TERRANCE SHERIDAN, Ohio Northern Univ — Dusty plasma particles in a confining potential ring regularly form into a single layer dust ring that sits above the electrode. The ring shaped sheath is generated using an electrode consisting of a variable aperture with a center boss. The height of the ring above the electrode can be measured and depends on a number of variables including the radius of the aperture. Measurements showed that the smaller the aperture, the higher the dust ring sits above the electrode. Measurements of the confining potential were also performed using the vibrational modes of the trapped dust particles.

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