

Abstract Submitted  
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**Measurement of the three-dimensional wave process in the dust acoustic wave**<sup>1</sup> JEREMIAH WILLIAMS, Wittenberg University — A complex (dusty) plasma is a four-component system composed of ions, electrons, neutral particles and charged microparticles. The presence of the microparticles gives rise to new plasma phenomena, including collective modes such as the dust acoustic wave. The dust acoustic wave mode has been the subject of intense experimental and theoretical study since being predicted in 1990 and identified experimentally in 1994. Previous experimental studies of this wave mode have been restricted to measurements in a single thin sheet of the dusty plasma system. In this work, we use tomographic image velocimetry techniques to examine the three-dimensional wave process over extended volume.

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