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Initial application of tomographic particle image velocimetry to complex (dusty) plasmas[1] J. WILLIAMS, Wittenberg University — Over the last decade, two-dimensional and stereoscopic particle image velocimetry (PIV) techniques have been applied in the study of wave, transport and thermal properties of complex (dusty) plasma. While a great deal of insight has been gained from these studies, these studies have also indicated that volumetric three-dimensional information is needed. To address this need, the Wittenberg University Plasma Laboratory (WUPL) has recently acquired and installed a tomographic PIV (tomo-PIV) diagnostic system for dusty plasma investigations. It employs a synchronized dual YAG laser, four camera system for measuring the particle transport in three dimensions over an extended volume. This poster will present information on this diagnostic technique and preliminary results.

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