Abstract Submitted
for the DPP14 Meeting of
The American Physical Society

Comparison of open-source particle image velocimetry (PIV) programs for dusty plasma studies[1] MEGAN HEITKEMPER, JEREMIAH WILLIAMS, Wittenberg University — Particle Image Velocimetry (PIV) is a non-invasive diagnostic technique that provides a quantitative measure of fluid flow and particle transport. Recent advances in imaging technology have led to the development of a time-resolved version of this diagnostic technique, which replaces a dedicated PIV diagnostic setup with a high-speed camera and a CW laser. This technique has been used to examine a wide range of phenomena in the dusty plasma community. Additionally, the availability of open-source PIV software has made this diagnostic technique accessible at a relative modest cost. This poster will present an overview of how the PIV technique can be applied to image data acquired with a high speed camera, the image requirements, and will provide a comparison of a number of open-source PIV software.

[1]This work supported by National Science Foundation Grant Number PHY-0953595

Jeremiah Williams
Wittenberg University

Date submitted: 11 Jul 2014 Electronic form version 1.4