

Abstract Submitted
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Measurement of an ellipsoidally symmetric velocity space distribution within a weakly-coupled dusty plasma ROSS FISHER, EDWARD THOMAS, Auburn University — The spatially resolved phase space distribution (PSD) was measured for a weakly coupled (fluid-like) dusty plasma using stereoscopic particle image velocimetry (stereo-PIV). It was found that the velocity space component of the PSD could not be modeled with the standard, spherically symmetric, tri-Maxwellian distribution function model. Instead, these data were modeled with the more general, ellipsoidally symmetric, tri-variant normal (tri-normal) distribution function. This presentation will discuss the two distribution models (the tri-Maxwellian and the tri-normal) as applied to experimentally measured PSDs for the dust component of the plasma.

Ross Fisher
Auburn University

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