

Abstract Submitted
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Digital holographic microscopy for imaging and characterization of micron-sized particles. NAVA SUBEDI, MATTHEW BERG, Mississippi State University, Department of Physics and Astronomy — We use the digital holographic microscopy (DHM) technique for particle imaging and characterization. In this work, the interference pattern produced by superposition of unscattered reference light and the scattered light is recorded by a digital camera. This pattern constitutes a hologram from which an image of the particle is computationally reconstructed. This technique has the potential to provide *in situ* particle information up to the sub-micron resolution level and helps in the development of instrumentation capable to characterize respirable-sized (1-10 μm) aerosol particles.

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