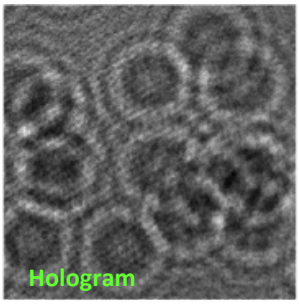
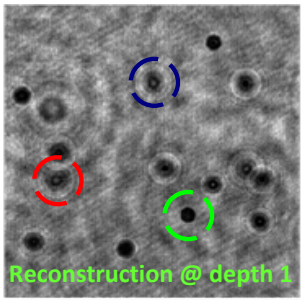
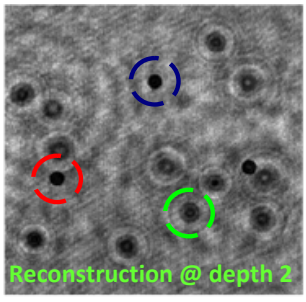
Digital 3D Particle Analyzer

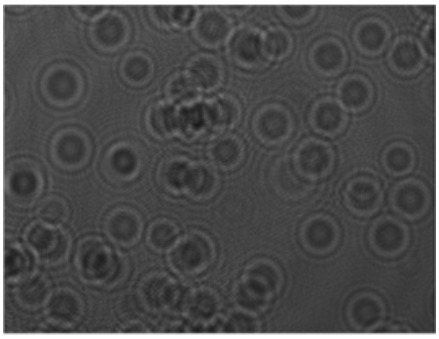
Digital 3D Particle Analyzer allows study of volume samples from a single recording of digital hologram and yields information of particles at several depths of focus without use of focusing optics. Particle sizes and shape information are extracted from the numerical reconstructions of the digital hologram at several depth of focus by using a novel automated image analysis algorithm. This simple system capable of providing particle size distribution from size ranges 30 µm to 1mm near real time.

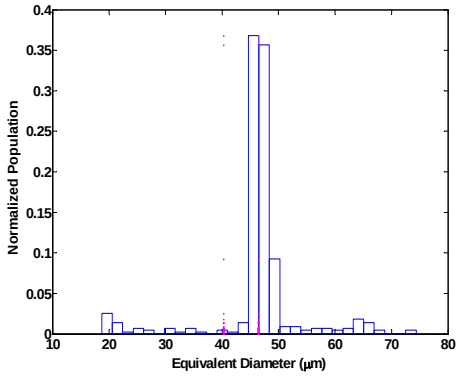


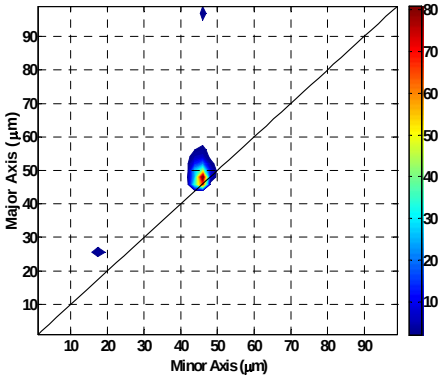




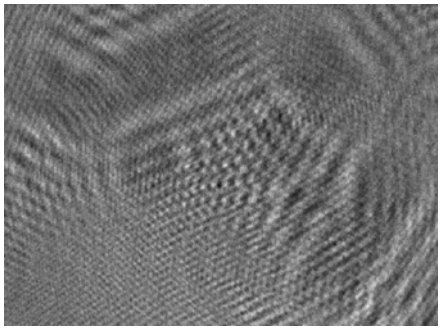
Measurement of spheres in suspension

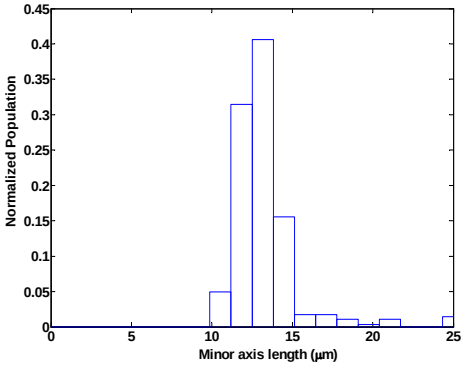


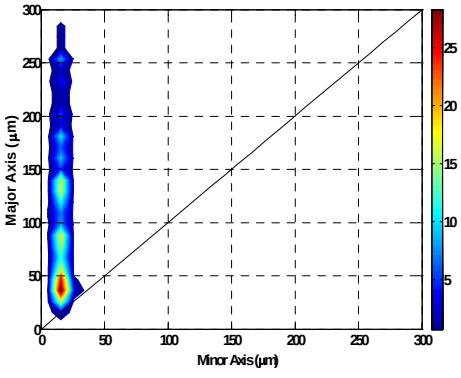


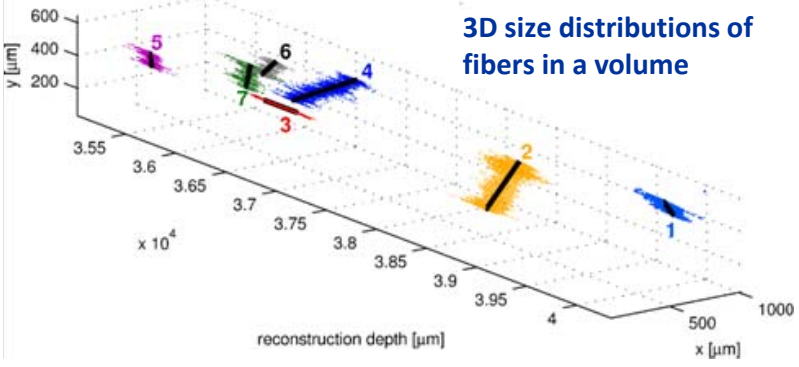


Measurement of fibers in suspension









3D size distributions of fibers in a volume

Specifications:

Lateral resolution: 7 µm
Depth resolution: 20 µm
Field of view: 5.95mm X 4.96mm
Measuring range: 30 µm ~ 1000 µm
Measurement accuracy: 95%

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