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Creating Turbulence with vortex rings¹ KELKEN CHANG, Cornell University, GREGORY P. BEWLEY, Max Planck Institute, EBERHARD BODEN-SCHATZ, Cornell University, INTERNATIONAL COLLABORATION FOR TUR-BULENCE RESEARCH COLLABORATION — We report measurements of the small-scale statistics of turbulence created by interacting vortices at a Taylor microscale Reynolds number of 500. We study the flow using Lagrangian particle tracking technique, in which the three-dimensional motion of passive oil particles in air is followed optically using multiple high speed cameras. We compare the results with measurements obtained in a nearly homogeneous and isotropic turbulent flow at comparable Reynolds number.

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