

Abstract Submitted
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Pair Dispersion in Turbulence EBERHARD BODENSCHATZ, Max Planck Institute for Dynamics and Self-Organization, MICKAEL BOURGOIN, LEGI-CNRS, NICHOLAS OUELLETTE, Cornell University, HAITAO XU, Cornell University, JACOB BERG, Risoe National Laboratory, INTERNATIONAL COLLABORATION FOR TURBULENCE RESEARCH (ICTR) COLLABORATION — We report measurements of relative dispersion in a high Reynolds number water flow using 3D optical particle tracking. We find excellent agreement with Batchelor's theoretical predictions, and do not see a fully developed Richardson law. Our results indicate that the initial separation of particle pairs is an important parameter for calculating dispersion in any flow of industrial or biological significance. This work is supported by the NSF and by the Max Planck Society.

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