

Abstract Submitted
for the DFD12 Meeting of
The American Physical Society

Rotation in turbulence of aquatic organisms modeled as particles

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— We investigate which length and time scales are relevant for determining the rotation of aquatic organisms and their gametes. We are interested in parameter space beyond the Stokes regime, and also the effect of particle shape on rotation. We report experimental measurements that use custom-manufactured particles to model aquatic organisms, which are designed with the necessary optical properties so that we can measure their rotation, simultaneously with the vorticity statistics of the surrounding fluid. Lagrangian timeseries of particles' angular velocity allows investigation of rotational diffusion.

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Date submitted: 12 Aug 2012

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