

Abstract Submitted
for the DFD13 Meeting of
The American Physical Society

Experiments in Stably Stratified Wakes I: Measurement and Characterization of Mean and Fluctuating Quantities¹ XINJIANG XIANG, TRYSTAN MADISON, PRABU SELLAPPAN, GEOFFREY SPEDDING, University of Southern California — In a stable background density gradient, initially turbulent motions evolve into a state that is dominated by low Froude number dynamics and that can also contain persistent pattern information. Nevertheless, little quantitative information is available in the initial flow evolution when the turbulence first adjusts to the background. Here we report on experiments in a refractive index matched facility for $0.6 \leq Fr \leq 8$ and $2500 \leq Re \leq 10000$, where flow quantities behind a towed grid are examined, and appropriate measures for this early wake regime are considered.

¹Support from ONR N00014-11-1-0553 gratefully acknowledged.

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Date submitted: 19 Jul 2013

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