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Comparing laboratory and numerical experiments on stratified wakes of bluff body[1] TRYSTAN MADISON, XINJIANG XIANG, GEOFFREY SPEDDING, University of Southern California — Turbulent wakes in stratified flows eventually reach a strongly stratified limit. In this limit, pattern geometry and information are preserved for long times with implications for detection of the wake signature. There is interest in, but little information on, how and whether pattern information originating at the body persists through this late time state. It is now possible to run laboratory experiments and affordable numerical approximations to estimate and predict the effects that initial conditions have on near and far wakes. Presented here is a comparison of recent laboratory and numerical experiments where parameterizations of near wakes are tested and sought for a number of Fr, Re, and varying geometries. Cases that are generalizable are identified.

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