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**Stratified flow past a conical obstacle at low Froude number** MASOUD JALALI, SUTANU SARKAR, GENO PAWLAK, University of California San Diego — The structure of flow in the lee of topographic features such as islands and headlands is affected by stratification, in particular, vertical motion is suppressed at low Froude number,  $Fr = U/Nh \ll O(1)$ . High-resolution, turbulence-resolving simulations using an immersed boundary method (IBM) have been performed to study the flow in a stratified background over a 3D conical obstacle. The blocked flow moves around the object where subsequent flow separation and vortex shedding leads to an unsteady wake. The body also generates lee waves. We will discuss simulation results regarding the vortex dynamics and internal wave properties.

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