

Abstract Submitted  
for the DFD09 Meeting of  
The American Physical Society

**Dissipation Mechanisms of Internal Solitary-like Waves in the Ocean** KEVIN LAMB, University of Waterloo — Internal solitary-like waves (ISWs) are ubiquitous, highly energetic features in the coastal ocean where they are predominately generated by tide-topography interaction. There are many unanswered questions about the generation and fate of these waves and a better understanding of these processes is necessary for developing parameterizations of their effects for use in large scale models. Several sets of observations have suggested that the mixing associated with ISW trains is important for setting the stratification in some regions of the coastal ocean (e.g, the Scotian Shelf and the Portuguese Shelf). This talk will begin with a discussion of the energetics of large amplitude internal waves. I will then discuss three dissipation mechanisms for ISWs and consequences for mixing: instabilities in the bottom boundary layer, the breaking of shoaling waves, and shear instabilities in the pycnocline. Results from 2D numerical simulations will be presented for all three mechanisms, with a focus on shear instabilities. 3D simulations of shear instabilities have recently been initiated. It is hoped that results from these simulations will also be presented.

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Date submitted: 06 Aug 2009

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