

The Generation of Internal Waves from Turbulence and Shear

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Internal waves are intimately connected with turbulence, whether through wave-wave interactions and breaking leading to turbulence or whether the turbulence itself excites internal waves. This talk will focus upon the latter process. Laboratory experiments have been performed to examine the generation of internal waves by flow over rough topography, turbulent shear flows, plumes and the collapse of mixed patches. The non-hydrostatic waves are often found to have frequencies that are an approximately constant fraction of the buoyancy frequency. The relative energy flux associated internal waves is estimated and implications for the oceanic wave spectrum discussed.

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