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An experimental investigation of energy transmission from an evanescent to a propagating region. ALLISON LEE, JULIE CROCKETT, Brigham Young University — Tidal flow over oceanic bathymetry is a well known generator of internal waves. However, in the deep ocean there are many regions of weak stratification and the tides will generate only evanescent waves which decay exponentially as they propagate away from their source. In locations where stronger stratification exists above the weak, evanescent waves can form propagating internal waves as they approach a depth with a stratification corresponding to their frequency (turning depth). An experimental study of the energy transfer from evanescent regions to propagating regions due to evanescent waves passing through a turning depth is presented. The effects of varying exponential stratification profiles and single and multi-peak topographical features are described and results are compared with linear theory approximations.

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