

Abstract Submitted
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Calculating viscous internal gravity waves STEFAN LLEWELLYN SMITH, MAE, UCSD — Internal gravity waves (IGWs) are ubiquitous features of the ocean and atmosphere, thought to be critical in global energy budgets. There has hence been much interest in developing simple models of IGW generation. However, only a few special solutions for simple geometries are known, and the hyperbolic spatial nature of the governing equations leads to numerical difficulties. At the same time, modern developments in laboratory techniques now reveal the quantitative effects of viscosity in experiments on IGW generation by oscillating bodies. Even fewer solutions are known when viscosity is present. We discuss boundary integral methods for viscous IGW generation, and present some results and applications.

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