

Abstract Submitted  
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**Numerical Simulation of Internal Tide Generation at a Continental Shelf Break** LAURA BRANDT, JAMES ROTTMAN, KYLE BRUCKER, DOUGLAS DOMMERMUTH, Naval Hydrodynamics Division, Science Applications International Corporation — A fully nonlinear, three-dimensional numerical model is developed for the simulation of tidal flow over arbitrary bottom topography in an ocean with realistic stratification. The model is capable of simulating accurately at the generation of fine-scale internal wave tidal beams, their interaction with an ocean thermocline and the subsequent generation of solitary internal waves that propagate on this thermocline. Several preliminary simulation results are shown for uniform and non-uniform flow over an idealized two-dimensional ridge, which are compared with linear theory, and for flow over an idealized twodimensional continental shelf.

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