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The Fission and Disintegration of Internal Solitary Waves Moving over Two-Dimensional Topography

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ABSTRACT

The propagation of long internal waves over two-dimensional topography is discussed. A two-dimensional version of the Korteweg-deVries equation is derived with variable coefficients which depend on the local fluid depth. The fission law for solitary waves propagating into shallower water for two density stratification models and the possible disintegration of a solitary wave into a dispersive packet are discussed on the basis of this equation.

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