Abstract View

Volume 3, Issue 1 (January 1973)

Journal of Physical Oceanography
Article: pp. 57–60 | Abstract | PDF (270K)

A Theory of Large-Amplitude Kelvin Waves

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(Manuscript received May 11, 1972, in final form September 20, 1972)

DOI: 10.1175/1520-0485(1973)003<0057:ATOLAK>2.0.CO;2

ABSTRACT

A simple nonlinear model of the generation of Kelvin waves is presented and applied to internal Kelvin waves in Lake Michigan. It is shown that a Kelvin wave which has a wavelength longer than the Rossby radius of deformation steepens. This may explain “warm fronts” in records of nearshore temperature in Lake Michigan.