



## Abstract View

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# Topographic Response of Nearshore Currents to Wind: An Empirical Model

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### ABSTRACT

Observations of winds and currents along the northshore of Lake Ontario are analyzed to evaluate effects of topographic wave propagation on wind-driven currents. Lagged cross-correlations and spectral transfer functions between winds and currents are found to be consistent with the mechanism of resonant topographic-wave response in the presence of bottom friction. Transfer function models in the time domain are shown to explain 70 to 80 percent of the variance of observed currents.

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