



## Abstract View

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# The Time-Dependent Response of a Circular Basin of Variable Depth to a Wind Stress

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### ABSTRACT

By solving an initial value problem, the time-dependent response of a large circular model lake to a steady wind stress has been investigated. Bottom stress has been neglected. The forced response has been divided naturally into a “seiche” response and a quasi-geostrophic “current” response; the former is composed of gravity and topographic waves, the latter topographic waves only. The forced quasi-geostrophic response, consisting of coastal jets and return flow, slowly rotates cyclonically around the basin. The model is compared with forced barotropic response observed in Lake Ontario.

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