Abstract View

A Study of Rotating Baroclinic Nonlinear Flow Around an Island

H.B. Gordon and R.L. Hughes

Australian Numerical Meteorology Research Centre, Melbourne, Victoria, 3001, Australia

ABSTRACT

Hogg (1972) has developed a perturbation model for the oceanic flow around an island. This perturbation model is restricted to small Rossby numbers. The present study extends Hogg's ideas by considering a simpler model applicable to arbitrary Rossby numbers. Of particular interest is the asymmetry in the decay rate of the island-induced disturbance. It is shown that for strong incident flows this effect may lead to a significant distortion of the flow far from the island in an f-plane situation.

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