



Abstract View

[Volume 11, Issue 7 \(July 1981\)](#)

Journal of Physical Oceanography

Article: pp. 1011–1014 | [Abstract](#) | [PDF \(262K\)](#)

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

(Manuscript received November 19, 1980, in final form March 23, 1981)

DOI: 10.1175/1520-0485(1981)011<1011:ASORBN>2.0.CO;2

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.

Options:

- [Create Reference](#)
- [Email this Article](#)
- [Add to MyArchive](#)
- [Search AMS Glossary](#)

Search CrossRef for:

- [Articles Citing This Article](#)

Search Google Scholar for:

- [H.B. Gordon](#)
- [R.L. Hughes](#)

top ▲



© 2008 American Meteorological Society [Privacy Policy and Disclaimer](#)

Headquarters: 45 Beacon Street Boston, MA 02108-3693

DC Office: 1120 G Street, NW, Suite 800 Washington DC, 20005-3826

amsinfo@ametsoc.org Phone: 617-227-2425 Fax: 617-742-8718

[Allen Press, Inc.](#) assists in the online publication of AMS journals.