



## Abstract View

[Volume 8, Issue 4 \(July 1978\)](#)

### Journal of Physical Oceanography

Article: pp. 644–652 | [Abstract](#) | [PDF \(586K\)](#)

# On the Interpretation of Ocean Current Spectra, Part II: Testing Dynamical Hypotheses

**Jack Calman**

*Department of Earth and Planetary Sciences, Massachusetts Institute of Technology, Cambridge 02139*

(Manuscript received July 25, 1977, in final form February 27, 1978)

DOI: 10.1175/1520-0485(1978)008<0644:OTIOOC>2.0.CO;2

### ABSTRACT

Three examples are chosen to illustrate how the several spectrum representations in Part I can be used to test whether a proposed dynamical mechanism is supported by a given set of observations. The examples are wind-forced surface currents, internal waves and bottom-trapped Rossby waves. Dynamical tests are formulated in the Cartesian, rotary, rotational invariant, hodograph and pre-specified spectrum representations. The limitations and prospects for applying these techniques to more complicated circumstances are discussed.

#### Options:

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

#### Search CrossRef for:

- [Articles Citing This Article](#)

#### Search Google Scholar for:

- [Jack Calman](#)

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](mailto:amsinfo@ametsoc.org) Phone: 617-227-2425 Fax: 617-742-8718

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