



Abstract View

[Volume 18, Issue 6 \(June 1988\)](#)

Journal of Physical Oceanography

Article: pp. 823–833 | [Abstract](#) | [PDF \(926K\)](#)

Mixing and Intrusions in a Rotating Cold-Core Feature off Cape Blanco, Oregon

James N. Moum and Douglas R. Caldwell

College of Oceanography, Oregon State University, Corvallis, Oregon

Phyllis J. Stabeno

Pacific Marine Environmental Laboratory, Seattle, Washington

(Manuscript received May 26, 1987, in final form December 3, 1987)

DOI: 10.1175/1520-0485(1988)018<0823:MAIIAR>2.0.CO;2

ABSTRACT

During August 1986, a large cold anomaly was observed in satellite and in situ measurements near Cape Blanco at 42°N, 126°30'W off the Pacific Coast. Detailed vertical profiles of temperature, conductivity, turbulent dissipation, and horizontal currents showed 1) surface water temperature changes as large as 2 degrees in 1 kilometer (but smaller gradients at depth); 2) a structure in the mean currents resembling that of either a cyclonic eddy or a current meander, 3) a current field in geostrophic balance on scales of 10 km and greater, 4) a region of intrusions on the northern side of the eddy; 5) a concentration of turbulence (as indicated by the kinetic-energy dissipation rate) on the edges of the eddy and in the region of intrusions, the core of the eddy being turbulence-free; and 6) a substantial change in the surface structure in 24 hours.

Options:

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

Search CrossRef for:

- [Articles Citing This Article](#)

Search Google Scholar for:

- [James N. Moum](#)
- [Douglas R. Caldwell](#)
- [Phyllis J. Stabeno](#)



© 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.