

AMERICAN METEOROLOGICAL SOCIETY

AMS Journals Online

AMS Home Journal

Journals Home

Journal Archive

Subscribe

For Authors

Help

Advanced Search

Search



Abstract View

Volume 8, Issue 6 (November 1978)

Journal of Physical Oceanography

Article: pp. 937–945 | Abstract | PDF (595K)

The Near-Surface Circulation of the Eastern North Pacific

A.D. Kirwan Jr.

Department of oceanography, Texas A&M University, College Station 77843

G.J. McNally

Scripps Institution of Oceanography, La Jolla, CA 92093

E. Reyna and W.J. Merrell Jr.

Department of Oceanography, Texas A&M University, College Station 77843

(Manuscript received April 28, 1978, in final form June 8, 1978) DOI: 10.1175/1520-0485(1978)008<0937:TNSCOT>2.0.CO;2

ABSTRACT

A description of the near-surface circulation of the eastern North Pacific during 1976–77 is given. The data for the study are obtained from 23 satellite (Nimbus 6) tracked drifters. The large-scale description obtained from the drifter trajectories is in good agreement with the mean annual dynamic topography. In the interior there is eastward zonal flow with a pronounced northward meander centered around 140°W. It is speculated that the meander, which is also seen in the mean annual dynamic topography, is an occasional feature closely connected with large-scale fluctuations of the surface wind. The trajectories define the eastern portion of the subarctic and subtropical gyres and the split between these gyres which occurs at about 50°N. In addition to these large-scale features, the trajectories show ubiquitous mesoscale activity. However, the mesoscale velocity field is not as strong as that reported for the western Atlantic or western Pacific. Separation statistics for the drifters indicate that very little dispersion occurs on time scales longer than 30 days and space scales greater than 300 km.

Options:

- Create Reference
- Email this Article
- Add to MyArchive
- Search AMS Glossary

Search CrossRef for:

• Articles Citing This Article

Search Google Scholar for:

- A.D. Kirwan
- G.J. McNally
- E. Reyna
- W.J. Merrell



© 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.