



## Abstract View

[Volume 9, Issue 3 \(May 1979\)](#)

### Journal of Physical Oceanography

Article: pp. 469–482 | [Abstract](#) | [PDF \(924K\)](#)

## Currents and Temperatures as Observed in Drake Passage During 1975

**R. Dale Pillsbury**

*School of Oceanography, Oregon State University, Corvallis 97331*

**Thomas Whitworth III and Worth D. Nowlin Jr.**

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

**Frank Sciremammano Jr.**

*School of Oceanography, Oregon State University, Corvallis 97331*

(Manuscript received August 15, 1978, in final form November 20, 1978)

DOI: 10.1175/1520-0485(1979)009<0469:CATAOI>2.0.CO;2

### ABSTRACT

Current and temperature records from 10 meters on six year-long moorings deployed during February 1975 in Drake Passage are examined and discussed in the context of hydrographic data from that area. The mean flow directions are consistent with those from geopotential anomaly charts, showing a northward flow in the central passage and eastward through-passage flow in the south and north. Directly measured vertical shear below 1000 m is remarkably uniform with depth in the central passage. Periods of high shear correspond to periods of high speed and are associated with lateral shifts in the velocity cores imbedded in the Antarctic Circumpolar Current at Drake Passage. Fluctuations in temperature and current are highly correlated in the vertical. Although meters near 2700 m separated by 80 km or more show only a few significant horizontal correlations for record-length statistics, there appear to be coherent fluctuations in the central passage during winter. Temperature and speed variability suggest that there are distinct thermal and kinematic regimes in Drake Passage.

#### Options:

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

#### Search CrossRef for:

- [Articles Citing This Article](#)

#### Search Google Scholar for:

- [R. Dale Pillsbury](#)
- [Thomas Whitworth](#)
- [Worth D. Nowlin](#)
- [Frank Sciremammano](#)



© 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.