

Dr. Amy Bower: Arabian Marginal Seas and Gulfs

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Project Summary

We have analyzed hydrographic data collected by the U. S. Naval Oceanographic Office (NAVOCEANO) in the outflow region of two important marginal seas; the Red Sea and the Persian Gulf. Our goal was to describe the synoptic scale structure of the outflow hydrography, with particular emphasis on (1) mixing of the outflow currents with the oceanic environment; (2) the occurrence of eddy formation (i.e. Reddies) and (3) the effect of the outflows on the adjacent seas. The primary data resource for this analysis was the synoptic AXBT surveys acquired by NAVOCEANO in the Gulf of Aden and Gulf of Oman. We also used the one-dimensional outflow plume model of Price and Baringer (1994) to investigate the dynamics of these two outflows.

Manuscripts



[Formation and Circulation of dense water in the Persian/Arabian Gulf.](#)

Swift., S. A. and A. S. Bower, 2003. *Journal of Geophysical Research - Oceans*, 108(C1), doi:10.1029/2002JC001360.

[Character and dynamics of the Red Sea and Persian Gulf Outflows.](#)



Bower, A. S., H. D. Hunt and J. Price, 2000. *Journal of Geophysical Research - Oceans*, 105(C3), 6387-6414.

[BETTER QUALITY FIGURES for](#)



Bower, A. S., H. D. Hunt and J. Price, 2000. Character and dynamics of the Red Sea and Persian Gulf Outflows. *Journal of Geophysical Research - Oceans*, 105(C3), 6387-6414.

Technical Reports



[Hydrographic Data from the U. S. Naval Oceanographic Office: Persian Gulf, Southern Red Sea, and Arabian Sea 1923-1996.](#)

Alessi, C. A., Hunt, H.D., and A. S. Bower, 1999. Hydrographic Data from the U. S. Naval Oceanographic Office: Persian Gulf, Southern Red Sea, and Arabian Sea 1923-1996. Woods Hole Oceanographic Institution, Technical Memorandum WHOI-99-02, Woods Hole, Massachusetts, 70 pp.

[Arabian Marginal Seas and Gulfs: Report of a Workshop held at Stennis Space Center, Miss. 11-13 May, 1999.](#)



Johns, W. E., G. A. Jacobs, J. C. Kindle, S. P. Murray, M. Carron, 1999. University of Miami RSMAS, Technical Report 2000-01.

Related Research

[Price, J. F. and M. O'Neil Baringer, 1994. Outflows and deep water production by marginal seas. *Progress in Oceanography*, 33, 161-200.](#)

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