Estimates of bottom flows and bottom boundary layer dissipation of the oceanic general circulation from global high resolution models

Brian K. Arbic1,2, Jay F. Shriver3, Patrick J. Hogan3, Harley E. Hurlburt4, Julie L. McClean4,5, Robert J. Metzger6,7, Robert B. Scott1,5, Ayon Sen1,6,7, Ole Martin Smedstad6, and Alan J. Wallcraft3

1Institute for Geophysics, John A. and Katherine G. Jackson School of Geosciences, The University of Texas at Austin, Austin, Texas, USA
2Now at Department of Oceanography and Center for Ocean-Atmospheric Prediction Studies, Florida State University, Tallahassee, Florida, USA
3NRL Research Laboratory, Oceanography Division, Stennis Space Center, Mississippi, USA
4Scripps Institution of Oceanography, University of California, La Jolla, California, USA
5Currently on leave at National Oceanography Centre, University of Southampton and National Environment Research Council, Southampton, United Kingdom
6Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, USA
7Now at Department of Applied and Computational Math, California Institute of Technology, Pasadena, California, USA
8Planning Systems Inc., Stennis Space Center, Mississippi, USA

Dissipation formula

\[
\dot{E} = \frac{1}{2} \rho \| \mathbf{u}_b \|^2, \tag{1}
\]

(Taylor 1949), where \( \| \mathbf{u}_b \| \) is the magnitude of the bottom velocity vector, and \( \rho \) is the density of the bottom water. Dissipation rates are computed from the model output on a time-accumulated basis. (2)

Comparison of models with current meter data

We compute globally integrated dissipation rates from

\[
\dot{E} = \int_0^L \dot{E}_j \, dt. \tag{2}
\]

where the \( \int \) operator represents an area integral.

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