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The Structure and Dynamics of the Ocean Surface Mixed Layer

G. L. Mellor and P. A. Durbin

Geophysical Fluid Dynamics Program, Princeton University, Princeton, N. J. 08540

ABSTRACT

The present paper describes a one-dimensional unsteady model of the ocean surface mixed layer. The model somewhat resembles the approach of Munk and Anderson in that the differential equations for mean velocity and temperature are solved. The Richardson-number-dependent stability functions which enter the model are significantly different, however, as is the fact that we are able to solve problems with realistic boundary conditions. Furthermore, all empirical constants have been determined from neutral turbulent flow experiments.

Comparisons of prediction and data are favorable.

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