Abstract View

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A Simple Ekman-Type Model for Predicting Thermocline Displacement in the Tropical Pacific

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ABSTRACT

A linear model is developed for the near-equatorial zone to estimate wind-driven convergences in the near-surface viscous boundary layer. Using the winds observed during EASTROPAC, an attempt is made to relate these convergences to the measured displacements of the tropical thermocline. Between 4° and 15° N, the sign of the displacements is predicted; however, the amplitude is generally underestimated. At the equator, extremely large values of the vertical eddy coefficients are necessary in order to obtain agreement between predicted and observed changes. This probably indicates that some essential physics has been neglected.