Mesoscale Surveys Over the Continental Shelf and Slope Near Pt. Arena, California

A. HUYER and P. M. Kosro (both at: College of Oceanography, Oregon State University, Corvallis, OR 97331)

As part of the Coastal Ocean Dynamics Experiment, eight mesoscale surveys were conducted between Pt. Arena and Pt. Reyes during the upwelling seasons (April-August) of 1981 and 1982. Each survey included both CTD and DAL velocity measurements. Each survey consisted of observations along five standard sections spanning the continental shelf and upper slope. Most surveys were made during brisk, upwelling-favorable winds. One of the surveys (April 1982) showed the structure was approximately two-dimensional, with alongshore gradients much smaller than the offshore gradients. Most, however, indicated that the dominant length scale was \( O(30 \text{ km}) \) in both the offshore and alongshore directions. Surface isotherms and isohalines generally lie nearer shore off Pt. Arena than farther south. There appears to be good qualitative agreement between measured and geostrophic velocities.

Additional CTD sections along the CODE Central Line and off Pt. Arena were made in both the upwelling season and in winter. These sections give information on the seasonal variation of the temperature, salinity, density and geostrophic velocity fields.