

Observing and Modeling the Upper Ocean in Monterey Bay: A Test-Bed for NEPTUNE

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Monterey Bay has been proposed as a test-bed for new instrumentation prior to deployment in the NEPTUNE region. Seafloor and water-column instruments will be integrated into new moorings and cabled systems currently being developed as part of the MBARI Ocean Observatory System (MOOS). The cables will form the basis for NEPTUNE testing, and the moorings will eventually supplant current moorings maintained by MBARI. Here we describe a test-bed project for coupled three-dimensional physical-biological models. With support from NOPP we are developing a model for Simulations of Coastal Ocean Physics and Ecosystems (SCOPE). The objective is to build an upper ocean physical-biogeochemical model capable of assimilating real-time observations and simulating fields at high temporal and spatial resolution (on the order of day, km). The implementation of an observing and modeling system for the NEPTUNE upper water-column will be discussed.

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