Ocean Vital Signs Network Seminar
Thursday August 20th 1 – 2:30 PM

Redfield Auditorium

Modeling and data assimilation of ocean physics and biogeochemistry in the California Current System

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Along the U.S. west coast, the California Current System experiences strong variability at daily to decadal temporal scales and spatial scales associated with basin, mesoscale, and submesoscale processes. Over many years, we have developed a modeling capability using the Regional Ocean Modeling System that has allowed analysis of ocean physics and biogeochemistry in this environment. In addition, we have developed data-constrained state estimates using 4-dimensional, variational data assimilation of both ocean circulation and biogeochemistry for long reanalyses and quasi-operational near real-time estimates, some of which are used in derivative products. This talk will discuss aspects of the modeling and data assimilation system, such as technical challenges in the assimilation of both physical and biogeochemical variables, marine carbon dioxide removal calculations, and impacts of topographically induced upwelling variability on primary production.

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