

An adaptive coastal observing mission concept utilizing a constellation of micro-satellites

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We describe an adaptive, integrated mission concept to characterize the interactions between dynamic processes, primary productivity and carbon fluxes in the coastal marine ecosystem. The mission concept consists of a constellation of ocean-color imaging micro-satellites, operating in conjunction with a network of *in-situ* assets, such as drifters and buoys. The micro satellites collect ocean-color data at a spatial, temporal and spectral resolution required to meet baseline scientific objectives. *In-situ* assets collect continuous surface and sub-surface data, which in addition to calibration and validation purposes, can be utilized to create a four-dimensional data set for researchers, managers and policy makers. A real-time, ground-based processing system analyzes each data stream for the occurrence of episodic-events and provides feedback for tasking both the remote and *in-situ* assets to increase the temporal and spectral resolution capabilities during critical periods. In this poster we show the end-end mission design concept, which is intended to be a NASA Earth Science System Pathfinder (ESSP) class mission.

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Poster