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## **Bio-physical coupling at meso- to submeso-scales in the upper ocean**

**A. Mahadevan**

Boston University (amala@bu.edu)

We examine the role of meso- and submeso-scale ocean dynamics on nutrient fluxes and phytoplankton distributions in the upper ocean. By exploring the link between biological distributions and physical parameters we aim to infer underlying processes from satellite-derived distributions of chlorophyll. Advection, mixing and biological growth rates affect the flux of nutrients and the spatial distributions of phytoplankton. These are varied in a model to seek relationships between the concentration or distribution of phytoplankton, biological productivity, and physical processes.