

Isotopic approaches to resolve mechanisms of the ocean's biological pump

How do the community composition and metabolic activity of primary producers and heterotrophs in the upper ocean affect carbon sequestration in the deep ocean?

Potential projects will employ organic and stable isotope techniques to distinguish the impacts of microbial and zooplankton metabolisms and/or particle dynamics on upper ocean C & N biogeochemistry and vertical flux (the biological pump). Lab research can begin with existing samples, and future seagoing field work is likely. Potential projects are likely to be integrated with broader oceanographic collaborations.

