Question: How does the Northern Hemisphere climate system impact the North American coastal ocean? How does the coastal ocean impact the global carbon cycle and climate?

Hypothesis 1. The West Coast is affected by ENSO, and the effects propagate from S to N, and by changes in the strength and location of the Aleutian Low (related to PDO), and the effects propagate from N to S.

Hypothesis 2. The East Coast is affected by the 1) Gulf stream flowing from the south to the north providing heat, momentum variability and nutrients, 2) cold low salinity nutrient poor water from the North.
West Coast System
(March 30, 2006)

Top Priority
- Glider lines
- 5-station profiler line
- Augmented MARS line
- 2-station profiler line
- HF radar

Also important
Consideration of an additional 2-station vertical profiler line to fill the mid-region gap (e.g., Cape Blanco)
West Coast System
(March 30, 2006)

Leverage systems
- OOI -- Global
- OOI -- RCO
- “NSF long-term coastal observatories”
- Other coastal observatories (inventory in progress)
- NOAA backbone
- Existing HF radar
- Historical long-term periodic surveys

Other coastal observatories
(VENUS, STC-SATURN, MARS, LTERs)

Historical
long-term
periodic surveys
Six bin “1” proposals, 2 MAB, 1 GOM, 1 SAB, Can we support 4 of 6 bin 1 proposals, AND other 11 RFAs

New endurance lines

GOM: impact of polar currents on shelf ecosystems

Shelf slope exchange processes

MAB endurance lines, LEO, MVCO (put on the table)

SAB: Gulf Stream Engine for North Atlantic & impact on coastal systems
Proposed Endurance arrays for East Coast. Some assets (LEO, MVCO, and Glider lines on MAB) already exist.

image added in proof, courtesy O Schofield et al.