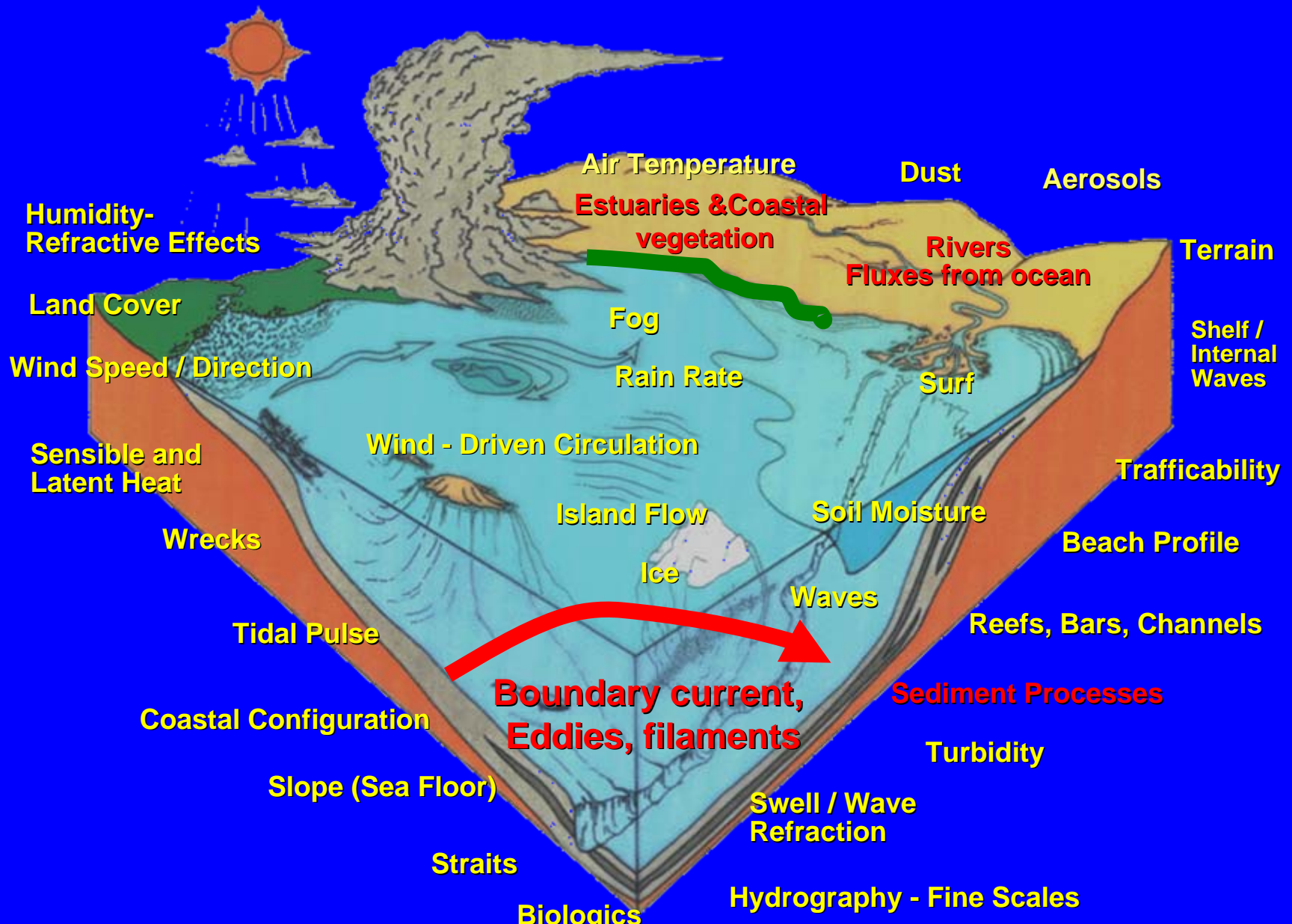


# Cross-Shelf Exchange Breakout Session

Ruoying He (NCSU), Samantha Siedlecki (JISAO), Larry Atkinson (ODU), Weijun Cai (UGA)



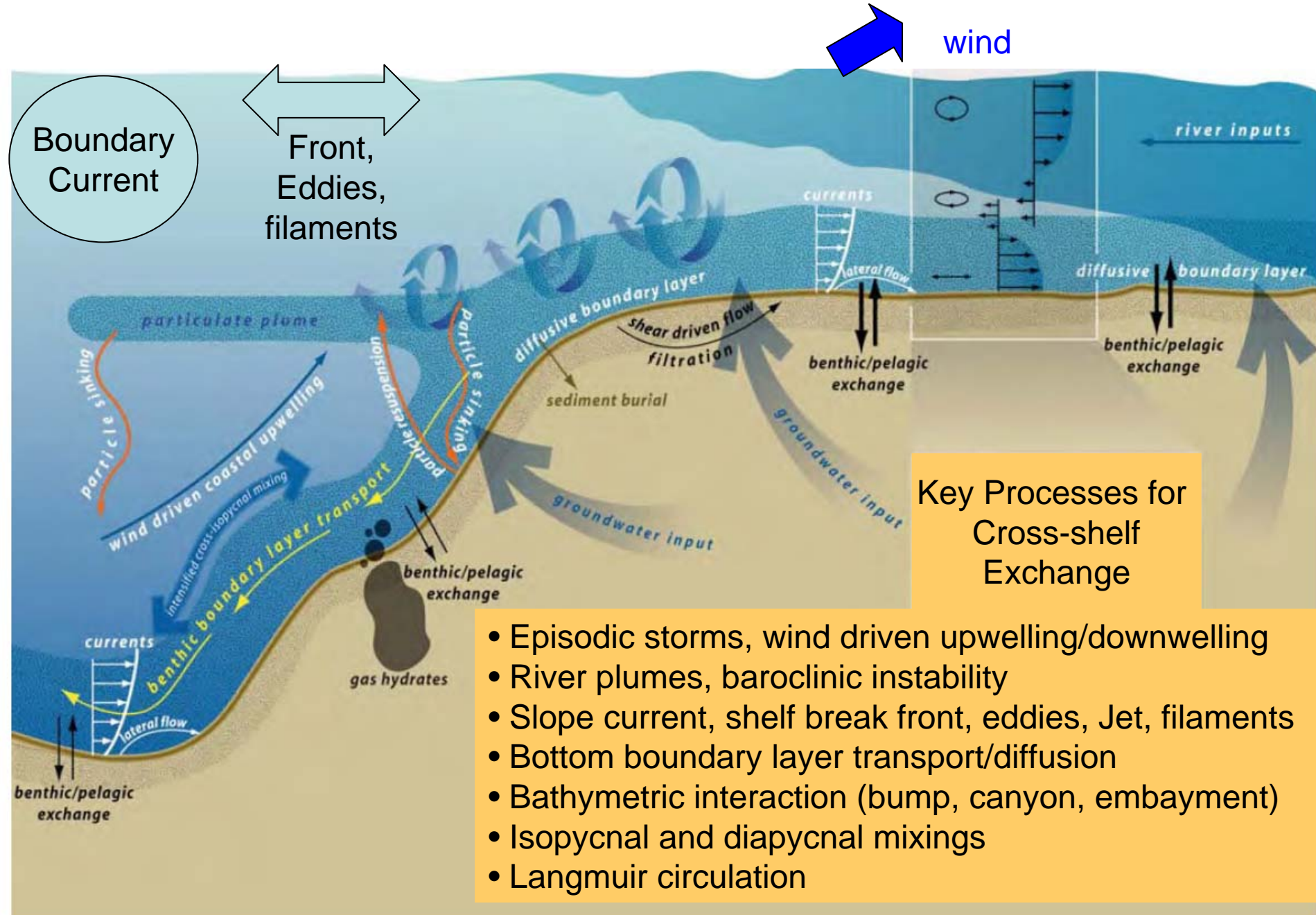


Figure 3.2.1. Selected processes that are intensified or unique to continental-margin ecosystems. Figure developed from CoOP's Coastal Benthic Exchange Dynamics (CBED) Workshop; designed by A. Boyette, Skidaway Institute of Oceanography.

**Can individual measurements of these processes be:**

**1) measured?**

**2) scaled up spatially and temporally?**

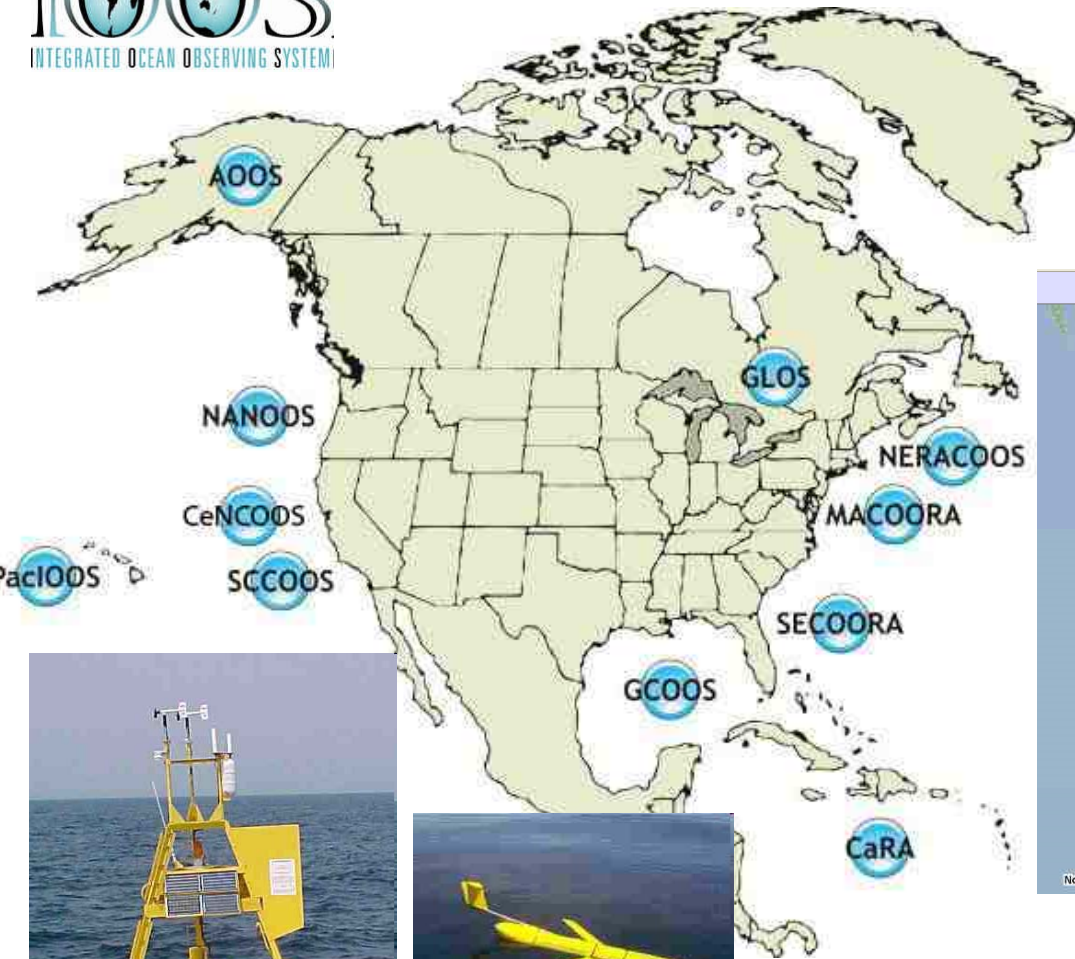
- Very difficult
- Redfield did it with a few measurements
- have to start somewhere
- Need long-term monitoring for fluxes
- Combination of satellite and array measurements with models will be most effective

# how well are the processes modeled?

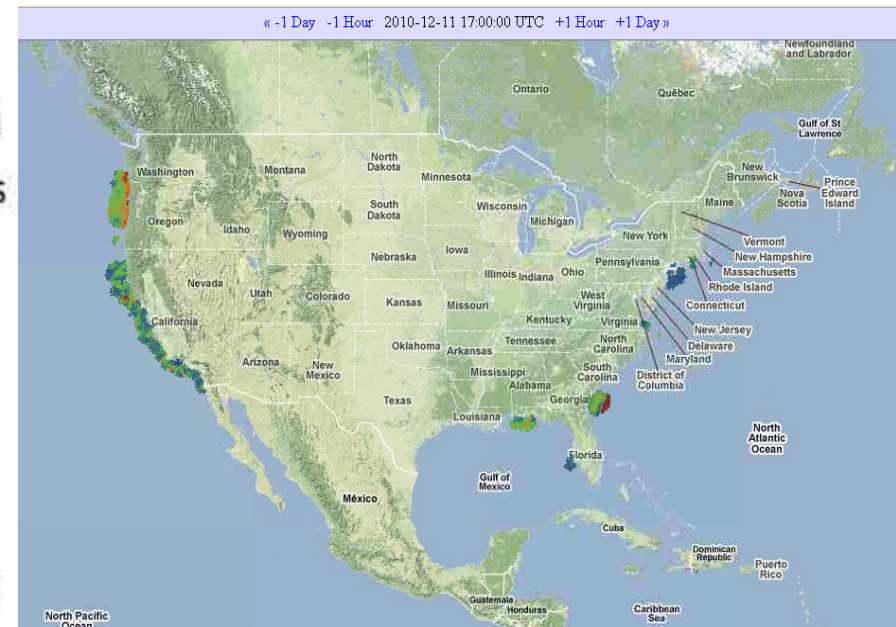
- Physical models with data assimilation are steadily improving
- Biogeochemical modeling still need work
- Biogeochemical models need to incorporate sediment suspension and transport components
- Need to synthesize all data from previous programs, such as OMP
- Model sensitivity experiments are informative for understanding different forcing scenarios, and climate variability



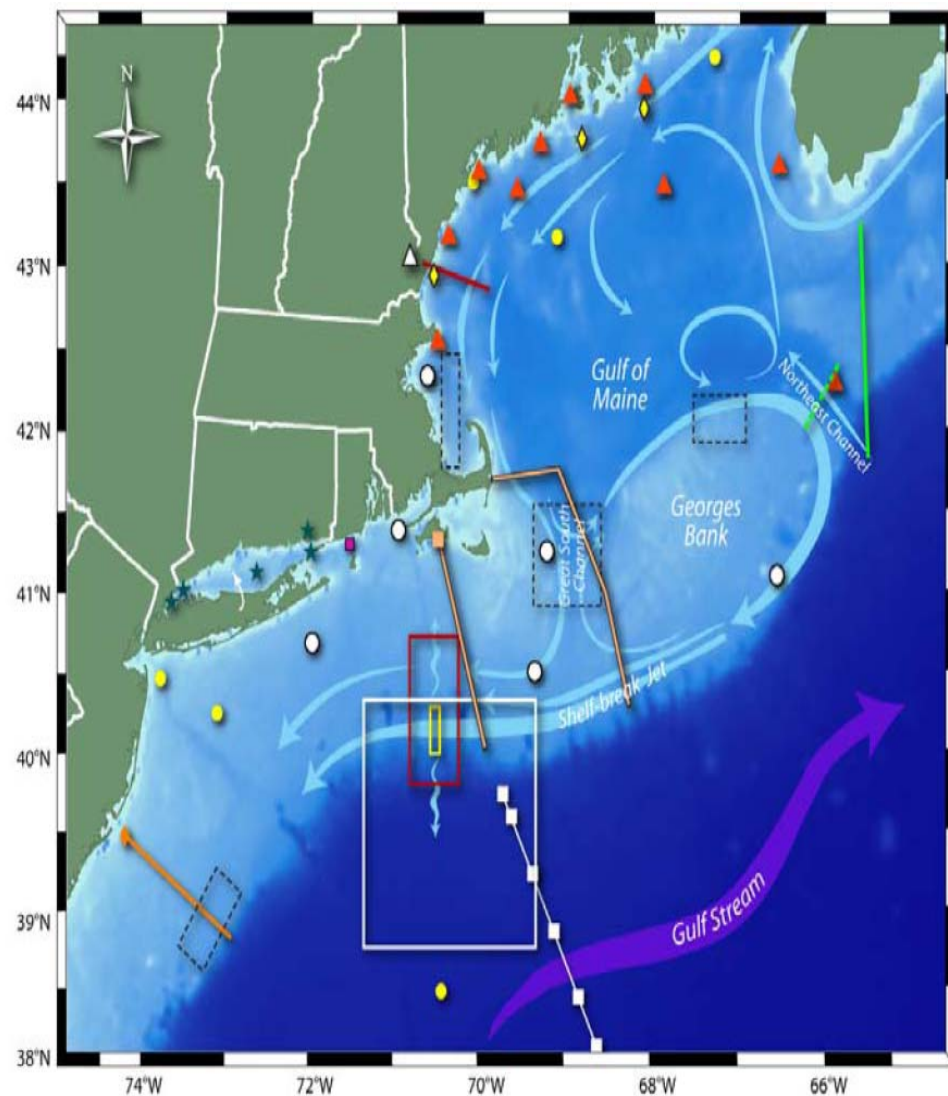
# OCB research need to leverage OOI, IOOS efforts



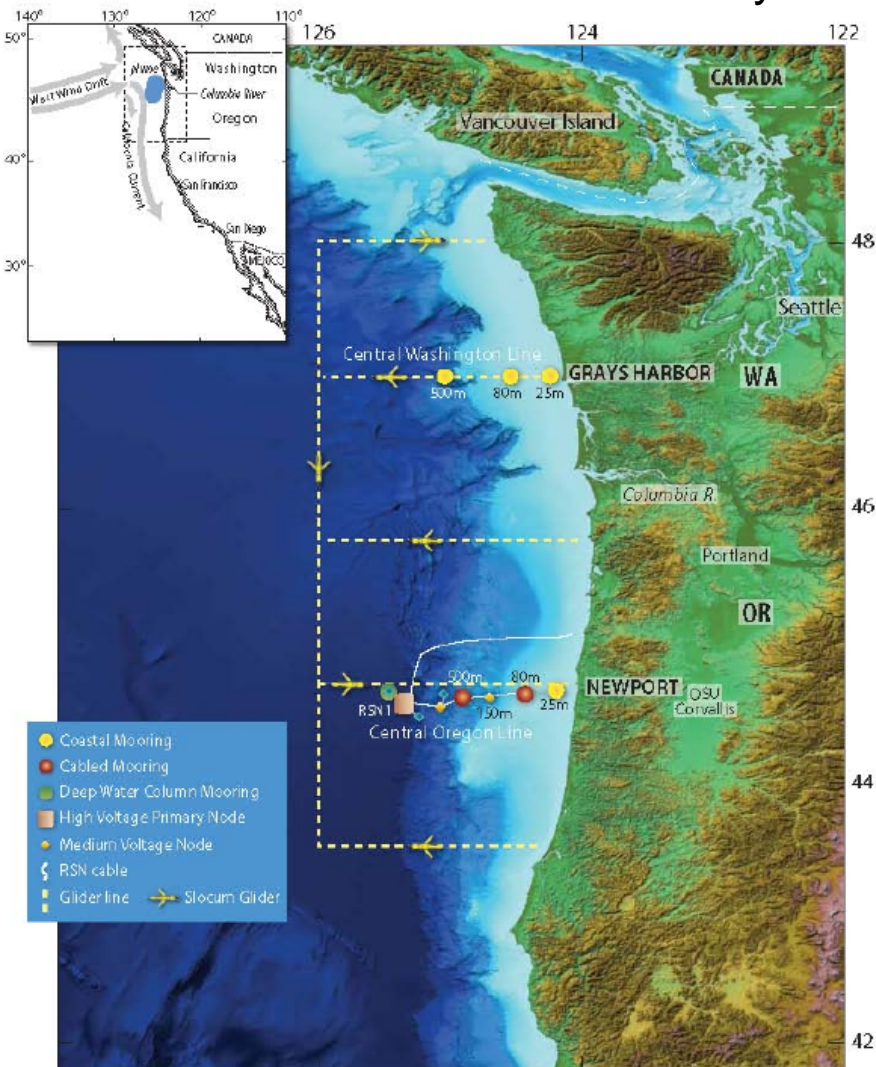
## National Surface Current Mapping Plan



## Shelfbreak Pioneer Array



## West Coast Endurance Array







Thursday, 16 December, 1230h-1330h

## **Science Opportunities and Workshop for Ocean Observatories Initiative Pioneer Array**

Moscone West, Room 2008

The Ocean Observatories Initiative (OOI) will be constructing an oceanographic observatory at the shelf break south of New England in the near future. This town hall meeting will briefly describe components of the observatory and outline interdisciplinary science themes that can be addressed by the observatory. The primary emphasis will be to answer questions and get ideas from the community for discussion at a science workshop to be held early in 2011. The intended audience is scientists and engineers interested in both the Pioneer Array and the OOI program. General comments about science inputs to OOI will also be discussed.

## Science Workshop for Shelf/Slope Processes and OOI Pioneer Array

Posted by [Will Ramos](#) on Monday, November 1st, 2010 at 9:19 am  
Filed under: [Discovery](#), [Events](#), [News & Resources](#), [Ocean Observing](#), [Workshops](#)



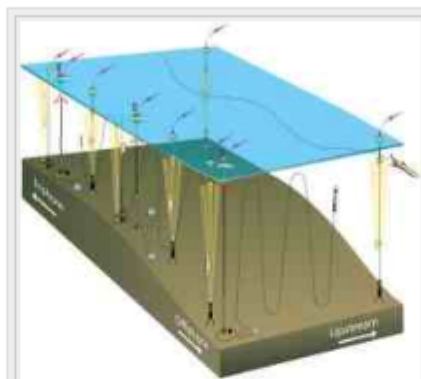
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As part of the planning process for the Ocean Observatories Initiative

(OOI) Pioneer Array in the Middle Atlantic Bight, a science workshop will be held in Providence, RI on February 22-24, 2011.

The objective of the workshop is to solicit community input to update the science questions which can be addressed by utilizing and leveraging the Pioneer Array based on its present design and anticipated operational capabilities. The Final (pre-deployment) Design Review of the OOI observatories including the Pioneer Array is available at <http://www.oceanleadership.org/programs-and-partnerships/ocean-observing/ooi/network-design>. The workshop organizers are Glen Gawarkiewicz (WHOI), Ruoying He (North Carolina State University), and James Nelson (Skidaway Institute of Oceanography). They will prepare a white paper based on community input and workshop discussions.

To facilitate in-depth discussion at the workshop, a maximum of 30-40 participants with a balance in disciplinary representation is targeted. We request individuals to submit two page Letters of Interest which may include both scientific uses of the Pioneer Array as well as comments on the present design and operational capabilities. These are solicited from all interested parties in the community and will be used in planning the workshop. Please submit these to the co-organizers by January 7, 2011. For the workshop, interested research institutions should contact the organizers by January 28, 2011 with the name of one representative who will be expected to be familiar with their colleagues' interests from their institution and contribute to the group discussions that will be reflected in the white paper. A Town Hall is planned for the AGU Fall Meeting in San Francisco to present information about the Pioneer Array and get community feedback on workshop planning. Further details will be announced in December. Please contact the organizers if there are any questions about the workshop. The organizers can be reached at [glen@whoi.edu](mailto:glen@whoi.edu), [rhe@ncsu.edu](mailto:rhe@ncsu.edu), and [Jim.Nelson@skio.usg.edu](mailto:Jim.Nelson@skio.usg.edu).



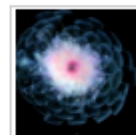
(Click to enlarge) The Pioneer Array, to be deployed in the Mid-Atlantic Bight, will combine moorings, ocean gliders and AUVs to sample a region spanning the continental shelf where depths off quickly, changing from 100 m to 500 m deep across the array of 10 moorings. Some of the buoys will generate power and provide that power to AUV docking stations on the seafloor. (Illustration by Jack Cook, Woods Hole Oceanographic Institution)



[« Home](#) | [« Previous Page](#)

### Discovery »

The Census of Marine Life: Photo of the Week - *Athorybia Rosacea*

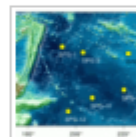


A lovely pink siphonophore, *Athorybia rosacea*, from the Sargasso Sea is actually a colonial organism similar to the Portuguese Man O'War.

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### Understanding »

Program Update: Deep Earth Academy - November 2010



Deep Earth Academy's Education Officer Joe Monaco has been onboard the JOIDES Resolution since early October, participating in IODP Expedition 329 *South Pacific Gyre Microbiology*.

[More articles »](#)

### Action »

Ocean Leadership 2011 Public Policy Forum



[March 9, 2011:] Every year, the Consortium for Ocean Leadership hosts a forum which features panels and presentations by representatives from Federal Agencies, Congress, and the ocean science community.

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