

**Ocean Carbon and Biogeochemistry (OCB) Summer Workshop**  
**Woods Hole Oceanographic Institution, Clark 507**  
**July 16-19, 2012**

**Monday July 16, 2012**

07:30-08:30 Continental Breakfast, hang posters

08:30 Introduction and announcements (*Benway/Doney, Woods Hole Oceanographic Inst.*)

**Session 1. Multiple Stressors in Marine Ecosystems**

**Chair: *Cindy Lee (Stony Brook Univ.)***

08:40 Impact of multiple stressors on fisheries (*Jorge Sarmiento, Princeton Univ.*)

09:20 Multiple stressors on upwelling margins: Untangling biological effects of hypoxia, hypercapnia and temperature (*Lisa Levin, Scripps Inst. of Oceanography*)

10:00 Break

10:30 Multiple stressors in coastal ocean environments – rethinking the impact of ocean acidification (*Wei-Jun Cai, Univ. of Georgia*)

11:10 Multiple stressors in eastern boundary upwelling regions (*Nicolas Gruber, ETH Zurich*)

11:50 Recent developments and forthcoming international activities in the study of multiple stressors (*Philip Boyd, NIWA, Univ. of Otago*)

12:00 Panel discussion

12:30 Lunch

**Session 2. Ocean biogeochemistry from satellite data**

**Chair: *David Siegel (Univ. of California, Santa Barbara)***

14:00 A tutorial on satellite ocean color remote sensing (*David Siegel, Univ. of California, Santa Barbara*)

14:45 Science goals and objectives from the NASA PACE (Pre-Aerosol, Clouds, and ocean Ecosystem) Science Definition Team report (*Michael Behrenfeld, Oregon State Univ.*)

15:30 Break

16:00 NASA PACE Science Definition Team report approach and recommendations (*Carlos Del Castillo, Johns Hopkins Univ.*)

16:45 Panel discussion and community input to PACE

17:15-19:30 Poster session and reception (Clark 2 foyer)

## **Tuesday July 17, 2012**

07:30-08:45 Continental Breakfast, hang posters

08:45 GEOTRACES: Highlights of recent scientific findings (*William Jenkins, Woods Hole Oceanographic Inst.*)

09:30 Student 2-minute presentations

10:30 Break

11:00 A pilot program to characterize the geography and impact of microbial biomes (*Jim Moffett, Univ. of Southern California*)

11:30 Questions and discussion

12:00 Lunch

12:30-13:30 **GROUP 1. BCO-DMO hands-on tutorial** (*Cyndy Chandler, Woods Hole Oceanographic Inst.*) – Group Training Facility, Clark 141

### **Session 3. Land-ocean transport and linkages with global change**

**Chair: Thomas S. Bianchi (Texas A&M Univ.)**

13:30 River transport and fluxes – freshwater, carbon, nutrients, etc. (*Valier Galy, Woods Hole Oceanographic Inst.*)

14:10 River plume processes and dynamics (*Steve Lohrenz, Univ. of Massachusetts, Dartmouth*)

14:50 The benthic processing of terrestrial organic matter on river-dominated margins (*Neal Blair, Northwestern Univ.*)

15:30 Break

16:00 Anthropogenic alteration of dissolved inorganic carbon fluxes from watersheds (*Peter Raymond, Yale University*)

16:40 Questions and discussion

**16:30 Special event for students and postdocs: Program Managers Research Funding Panel (Carriage House)**

17:10 Poster session (Clark 2 foyer)

17:30-18:30 **GROUP 2. BCO-DMO hands-on tutorial** (*Cyndy Chandler, Woods Hole Oceanographic Inst.*) – Group Training Facility, Clark 141

Dinner on your own

## **Wednesday July 18, 2012**

07:30-08:30 Continental Breakfast, hang posters

### **Session 4. Integrating measurements across multiple time and space scales**

**Chair: Craig Carlson (Univ. of California, Santa Barbara)**

08:30 Recent and upcoming U.S. and international time-series activities (*Craig Carlson, Univ. of California, Santa Barbara*)

08:45 Ocean Station Papa time-series (*Steve Emerson, Univ. of Washington*)

09:25 California Current Ecosystem Dynamics: A multi-scale perspective (*Mark Ohman, Scripps Inst. of Oceanography*)

10:05 Patterns of phytoplankton limitation and hypoxia in the northern Gulf of Mexico: Observations, simulations and predictability (*Katja Fennel, Dalhousie Univ.*)

10:45 Break

11:15 The REgional Carbon Cycle Assessment and Processes (RECCAP) effort (*Galen McKinley, Univ. of Wisconsin, Madison*)

11:55 Questions and discussion

12:30 Lunch

13:00-14:00 **GROUP 3. BCO-DMO hands-on tutorial** (*Cyndy Chandler, Woods Hole Oceanographic Inst.*) – Group Training Facility, Clark 141

### **Session 5. New observations from an Arctic Ocean in rapid transition**

**Chair: Jeremy Mathis (Univ. of Alaska, Fairbanks)**

14:00 ICESCAPE (Impacts of **C**limate change on the **E**co-**S**ystems and **C**hemistry of the **A**rctic **P**acific **E**nvironment): Overview of scientific findings (*Jeremy Mathis, Univ. of Alaska, Fairbanks*)

14:40 Transformation and fluxes of carbon in a changing Arctic Ocean and it's impact on ocean acidification, the Atlantic view (*Leif Anderson, Univ. of Gothenburg*)

15:20 Questions and discussion

15:30 Break

16:00 NASA Terrestrial Ecology Program's proposed Arctic field campaign: the Arctic-Boreal Vulnerability Experiment (ABoVE) (*Peter Griffith, NASA GSFC*)

16:15 Community discussion and feedback on ABoVE

16:30 Poster session (Clark 2 foyer)

18:00-21:00 Workshop dinner (Fenno lawn, under the tent)

## **Thursday July 19, 2012**

07:30-08:30 Continental Breakfast

08:30 Agency updates

- NOAA (*Dwight Gledhill*) – NOAA update and report on International Ocean Acidification Observing Network workshop (June 2012, Seattle, WA)
- NSF (*David Garrison, Donald Rice*)
- NASA (*Paula Bontempi*)

10:00 Break

10:30 Revised North American Coastal Carbon Budgets: An Update on the NACP/OCB Coastal Synthesis Activity (*Marjorie Friedrichs, Virginia Institute of Marine Science*)

11:00 A U.S. Carbon Cycle Science Plan for the next decade: Where do we go from here? (Community discussion moderated by *Kendra Daly, Univ. of South Florida*)

12:00 Adjourn and Lunch

13:00 OCB Scientific Steering Committee (SSC) meeting, **Clark 271** (*OCB SSC members and agency representatives only*)