

Ocean Carbon and Biogeochemistry Workshop 2014: Agenda with Slides and Videos

Ocean Carbon and Biogeochemistry (OCB) Summer Workshop

Woods Hole Oceanographic Institution, Clark 507

July 21-24, 2014

WORKSHOP AGENDA

Monday July 21, 2014

07:30 Continental breakfast in Clark 507, hang posters in Clark 2 lobby

08:30 Welcome and introduction - *Craig Carlson (UCSB), Heather Benway (OCB/WHOI)*

Quicktime http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/0721/0830WelcomeandIntroduction.html

webm http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/0721/0830WelcomeandIntroduction.webm

Plenary Session. The Coupled North Atlantic-Arctic System: Processes and Dynamics

Chairs: *Eileen Hofmann (ODU), Jeremy Mathis (NOAA/PMEL), Mike Roman (UMCES/HPL), Barney Balch (Bigelow)*

Part 1. Introduction

08:40 [An international North Atlantic-Arctic planning workshop](#) (*Eileen Hofmann, ODU*)

Quicktime http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/0721/0840AnInternationalNorthAtlanticArcticPlanningWorkshop.html

webm http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/0721/0840AnInternationalNorthAtlanticArcticPlanningWorkshop.webm

Part 2. Physical circulation and climate

09:00 [Atlantic Meridional Overturning Circulation \(AMOC\) variability and the Overturning in the Subpolar North Atlantic Program \(OSNAP\)](#) (*Youngho Kim, WHOI*)

Quicktime http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/0721/0900AtlanticMeridionalOverturningCirculationAMOCVariabilityandtheOverturningintheSubpolarNorthAtlanticProgramOSNAP.html

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09:45 [Mesoscale and submesoscale physical-biogeochemical interactions in the North Atlantic](#) (*Dennis McGillicuddy, WHOI*)

Quicktime http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/0721/0945MesoscaleandSubmesoscalePhysicalBiogeochemicalInteractionsintheNorthAtlantic.html

webm http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/0721/0945MesoscaleandSubmesoscalePhysicalBiogeochemicalInteractionsintheNorthAtlantic.webm

10:30 Break

11:00 [Arctic sea ice and climate](#) (*Jim Overland, NOAA/PMEL*)

Quicktime http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/0721/1100ArcticSeaIceandClimate.html

webm http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/0721/1100ArcticSeaIceandClimate.webm

11:45 [Beaufort Gyre dynamics and implications for North Atlantic-Arctic exchange](#) (*Andrey Proshutinsky, WHOI*)

Quicktime http://mex1.who.edu:8080/http/WHOI_CMS/Events/OC

webm http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2

12:30 NETWORKING LUNCH – Please note assigned tables for this lunch! (Fenno lawn, under tent)

Part 3. Marine ecosystems and biogeochemistry

13:45 [Response of North Atlantic ecosystems to climate change](#) (*Andy Pershing, GMR*)

Quicktime http://mex1.who.edu:8080/http/WHOI_CMS/Events/OC

webm http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2

14:30 [North Atlantic bloom composition and vertical fluxes](#) (*Tatiana Rynearson, URI*)

Quicktime http://mex1.who.edu:8080/http/WHOI_CMS/Events/OC

webm http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2

15:15 Break

15:30 [Arctic sea ice, primary productivity, and climate change](#) (*Paty Matrai, Bigelow*)

Quicktime http://mex1.who.edu:8080/http/WHOI_CMS/Events/OC

webm http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2

16:15 [Overview of Arctic/North Atlantic ocean acidification](#) (*Jeremy Mathis, NOAA/PMEL*)

Quicktime http://mex1.who.edu:8080/http/WHOI_CMS/Events/OC

webm http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2

17:00 Panel discussion

Quicktime http://mex1.who.edu:8080/http/WHOI_CMS/Events/OC

webm http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2

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

Tuesday July 22, 2014

07:30 Continental breakfast in Clark 507, hang posters in Clark 2 lobby

08:15 Agency updates (Debbie Bronk, NSF)

Quicktime

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David Garrison, NSF

Quicktime

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Paula Bontempi, NASA

Quicktime

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Questions

Quicktime

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Plenary Session. The Biological Pump: Transport Mechanisms and Mesopelagic Processes

Part 1. Mechanisms of carbon transport to the ocean interior

Chairs: *Matt Church (Univ. Hawaii), Adrian Burd (UGA), Craig Carlson (UCSB)*

Overview talks

09:00 [Vertical migration](#) (*Debbie Steinberg, VIMS*)

Quicktime

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09:20 [Passive particle flux](#) (*Ken Buesseler, WHOI*)

Quicktime

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09:40 [Physical delivery of DOM and microbial response](#) (*Craig Carlson, UCSB*)

Quicktime

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Focused talks

10:00 [Autonomous sensors for quantifying mesopelagic carbon flux](#) (*Henry Bittig, GEOMAR*)

Quicktime

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http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB201

10:30 Break

10:45 [Grazer-mediated flux and episodic nature of salp flux on export](#) (*Stephanie Wilson, Bangor Univ.*)

Quicktime

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11:15 [Aggregation/disaggregation - modeling particle formation and the associated dynamics](#) (*Adrian Burd, UGA*)

Quicktime

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11:45 [Enzymatic activity/solubilization](#) (Carol Arnosti, UNC)

Quicktime

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12:15 Panel discussion

12:45 Lunch (Fenno lawn, under tent)

Part 2. New insights into the biology and biogeochemistry of the mesopelagic zone

Chairs: Susanne Neuer (ASU), Carol Arnosti (UNC), Bethany Jenkins (URI)

Overview talk

14:00 [Reconciling the carbon budget in the ocean's twilight zone](#) (Sarah Giering, NOC)

Quicktime

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Focused talks

14:30 [Investigating nitrogen remineralization in the mesopelagic with molecular and geochemical approaches](#) (Alyson Santoro, UMCES)

Quicktime

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15:00 [Coordinated factors on particles - quorum sensing](#) (Ben Van Mooy, WHOI)

Quicktime

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15:30 [The effects of minerals on the aggregation, sinking, and destruction of POC](#) (Christina De La Roca, Univ. Brest)

Quicktime

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16:00 Break

16:15 [The role of micronektonic vertical migrants in the ocean carbon pump](#) (Santiago Hernández-León, Univ. Las Palmas)

Quicktime

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webm

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16:45 [EXPORTS update](#) (David Siegel, Univ. California, Santa Barbara)

Quicktime

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webm

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17:00 Panel discussion

Quicktime

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webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day2/OCBD2_18.webm

17:30 Poster session

18:30 Workshop Dinner (Fenno lawn, under tent)

Wednesday July 23, 2014

07:30 Continental breakfast in Clark 507, hang posters in Clark 2 lobby

08:30 [Student presentations](#)

Quicktime

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day3/OCBD3_1R.mov

webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day3/OCBD3_1.webm

Plenary Session. Advances in our Understanding of the Role of Sea Ice in the Global Carbon Cycle

Chairs: *David Ho (Univ. Hawaii), Bill Asher (UW), Paty Matrai (Bigelow), Kristina Brown (UBC)*

09:30 Present state of sea ice and the implications for air-sea interactions (*Ted Maksym, WHOI*)

Quicktime

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day3/OCBD3_2R.mov

webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day3/OCBD3_2.webm

10:15 Break

10:30 [Role of sea ice in global biogeochemical cycles](#) (*Clara Deal, Univ. Alaska, Fairbanks*)

Quicktime

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day3/OCBD3_3R.mov

webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day3/OCBD3_3.webm

11:15 [CO₂ biogeochemical cycling within and under sea ice](#) (*Nicholas Bates, BIOS*)

Quicktime

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day3/OCBD3_4R.mov

webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day3/OCBD3_4.webm

12:00 [CO₂ fluxes across the air-ice interface](#) (*Bruno Delille, Univ. Liege*)

Quicktime

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webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day3/OCBD3_5.webm

12:45 Lunch (Fenno lawn, under tent)

14:00 [Air-sea gas exchange in the sea ice zone](#) (*Brice Loose, URI*)

Quicktime

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day3/OCBD3_6R.mov

webm

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14:45 [Modeling of the carbon cycle in the polar oceans](#) (*Manfredi Manizza, SIO*)

Quicktime

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15:30 Panel discussion

Quicktime

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webm

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Plenary Session. The Ocean Observatories Initiative (OOI): Opportunities for the OCB Community

16:00 [The Ocean Observatories Initiative \(OOI\): Opportunities for the OCB Community](http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/OscarR.mov) (*Oscar Schofield, Rutgers*)
http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/OscarR.mov

16:45 OOI Panel discussion and Q&A Session (*Panelists: Oscar Schofield, Rutgers; Kendra Daly, USF; Tim Cowles, Consortium for Ocean Le*)
http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/PanelR.mov

17:15 Poster session

17:15-19:00 Program managers research funding panel discussion (Carriage House, for students and postdocs only please)

Dinner on your own

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Thursday July 24, 2014

07:30 Continental Breakfast in Clark 507 (please make sure all posters have been taken down)

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A Formal External Review of the OCB Program

08:30 [Results of the OCB Community Survey](#) (*Glenn Page, Sustainamatrix*)

Quicktime

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_3R.mov

webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_3.webm

09:00 OCB messaging and communication (*Fritz Holznagel, Sustainamatrix*)

Quicktime

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_4R.mov

webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_4.webm

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Community Discussion on Ocean Omics Data Infrastructure Needs

09:30 [Introductory remarks](#) (*Bethany Jenkins, URI, Mak Saito, WHOI*)

Bethany Jenkins:

Quicktime

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webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_1.webm

Mak Saito:

Quicktime

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webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_2.webm

09:45 Questions and community discussion

10:30 Break

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Community Updates and Activities

11:00 Joint U.S. CLIVAR/OCB working group update: Southern Ocean Heat and Carbon Uptake (*Joellen Russell, Univ. Arizona*)

Quicktime

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webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_8.webm

11:15 [OCB Scoping Workshop report: Improving predictive biogeochemical models through single cell-based analyses of marine plankton physics](#) (*Mike Lomas, Bigelow Laboratory*)

Quicktime

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_7R.mov

webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_7.webm

11:30 [IMBER and Future Earth](#) (*Eileen Hofmann, ODU*)

Quicktime

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_6R.mov

webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_6.webm

11:45 [International Ocean Carbon Coordination Project \(IOCCP\) Update](#) (*Laura Lorenzoni, USA*)

Quicktime

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_5R.mov

webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_5.webm

12:00 [Arctic-COLORS, a NASA Arctic Scoping Study](#) (*Joe Salisbury, UNH*)

Quicktime

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webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_9.webm

12:15 Adjourn

Quicktime

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webm

http://mex1.who.edu:8080/http/WHOI_CMS/Events/OCB2014/Day4/OCBD4_10.webm

12:15 Lunch (Fenno lawn, under tent)

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

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