Synthesis and Modeling Project PI Meeting
July 10-14, 2000
Woods Hole Oceanographic Institution

LIST of PARTICIPANTS
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AGENDA: *(last update 5 July 2000)*

Mon July 10

7:30-8:30 *Continental Breakfast*

8:30-9:30 **INTRODUCTION:** logistics - current status - new PIs - special volume - future directions - short courses - community outreach

9:30-10:00 **WORKSHOP REPORT: Equatorial Pacific**

10:00-10:30 *Break*

10:30-12:00 **15 MIN TALKS *(Tropical Pacific/Atlantic, HOT & BATS; S. Ocean):***

Hofmann et al. Evaluation of marine primary productivity in the tropical Pacific and Atlantic Oceans using satellite ocean color and numerical models
Christian et al. Modeling interannual variability of plankton and biogeochemistry in the tropical Pacific Ocean.
Turk et al. Basin scale estimates of new production during 1997-1999 El Nino and La Nina events in the tropical Pacific; a multisensor approach
Christian & Letelier Modeling microbial processes and dissolved organic matter: a case study at the US JGOFS time series station ALOHA
McGillicuddy et al. Modeling mesoscale biogeochemical processes in a Topex/Poseidon diamond surrounding the US JGOFS Bermuda Atlantic Time-series Study.
Hofmann et al. Comparative modeling and data analysis studies for the Ross Sea and West Antarctic Peninsula Regions: a JGOFS synthesis and modeling project

12:00-1:30 *Buffet Lunch*

1:30-3:00 **15-MIN TALKS *(Primary Production, Zooplankton and Ecosystem Dynamics):***

Wiggert Primary productivity during the winter monsoon in the northern Arabian Sea: Processes controlling diurnal cycling and interannual variability.
Sambrotto et al. Estimate of new (nitrate) uptake and net community production in the Antarctic Polar Front region.
Dutkiewicz et al. Effect of interannual variability of mixing and light on phytoplankton

abundances.
Leising et al. Zooplankton grazing functions and ecosystem dynamics: a critical review of the assumptions. Part I.
Gentleman et al. Zooplankton grazing functions and ecosystem dynamics: a critical review of the assumptions. Part II.
Anderson & Ducklow Bacterial control of DOM cycling in the open sea and marginal seas. I. Steady state flow analysis

3:00-3:30 *Break*

3:30-4:15 **DATA MANAGEMENT** - Presentation on US JGOFS Data Management System by Christine Hammond, followed by overall discussion of data management issues

4:15-5:00 **PLENARY DISCUSSION**

5:00-6:00 ****** RECEPTION ******

6:00-> *Dinner on your own*

evening **POSTERS**

Tue July 11

7:30-8:30 *Continental Breakfast*

8:30-8:45 **BRIEFING**

8:45-9:15 **WORKSHOP REPORT: Nitrogen Fixation**

9:15-10:15 **15-MIN TALKS *(Nitrogen Fixation and Satellite Applications):***

Hood et al. Remote estimation of *Trichodesmium* biomass and N2-fixation
Siegel et al. Global ocean distribution of colored organic materials.
Yoder Interannual variability in satellite ocean color imagery.

10:15-10:45 *Break*

10:45-11:15 **WORKSHOP REPORT: Coastal Margins**

11:15-12:00 **15-MIN TALKS *(Coastal Margins)*:**

Redalje et al. Ocean Margins Program
Carr & Kearns A comparison of potential productivity in the California and Benguela Currents.
Muller-Karger et al. Synoptic analysis of factors influencing carbon fluxes at the CARIACO continental margin time series.

12:00-1:30 *Lunch*

1:30-3:00 **WG MEETINGS:**
- **Regional Test Beds**
- **Food Web**
- **Satellite Biogeochemisty/Coastal Margins**

3:00-3:30 *Break*

3:30-5:00 **WG MEETINGS:**
- **Global Scale Biogeochemistry**
- **Large-scale Data Sets**
- **Functional Groups/N2 Fixation**

6:00-> *Dinner on your own*

evening **POSTERS**

Wed July 12

7:30-8:30 *Breakfast*

8:30-8:45 **BRIEFING**

8:45-10:15 **15-MIN TALKS *(Basin & Global-scale Synthesis & Modeling)*:**

Lee et al. Global fields of carbonate ion concentration using the recently collected WOCE/JGOFS global carbon data
Robbins et al. Oxygen and carbon fluxes in the Pacific Ocean determined from the WOCE/JGOFS hydrographic survey
Gruber et al. Net air-sea fluxes of natural and anthropogenic CO2 from an inversion of ocean inorganic carbon observations
Mishonov et al. Global POC synthesis from beam attenuation data collected during JGOFS, WOCE and other programs
Honjo et al. Global export and recycling of biogenic material into the ocean interior: Strategy and initial results towards a synthesis

10:15-10:45 *Break*

10:45-11:30 **15-MIN TALKS *(Basin & Global-scale Synthesis & Modeling - continued):***

Jahnke Global synthesis of deep ocean carbon, carbonate, opal and nutrient particle fluxes, benthic fluxes and sediment accumulation
Armstrong et al. A bottom (of the ocean) up approach to ecosystem modeling for global biogeochemistry
Hansell & Carlson Dissolved organic carbon export by overturning circulation
Gnanadesikan New production as a constraint on ocean circulation
Sarmiento et al. Sensitivity of air-sea CO2 balance to surface nutrients and ocean circulation

11:30-12:00 **UPDATE:** Working Group organization (splitting and/or lumping?), needs, goals, etc

12:00-1:30 *Buffet Lunch*

1:30-3:00 **WG MEETINGS:**
- **Regional Test Beds**
- **Food Web**
- **Satellite Biogeochemisty/Coastal Margins**

3:00-3:30 *Break*

3:30-5:00 **WG meetings, continued**

6:00-> *Dinner on your own*

evening **POSTERS**

Thu July 13

7:30-8:30 *Continental Breakfast*

8:30-8:45 **BRIEFING**

8:45-10.15 **15-MIN TALKS *(Basin & Global-scale Synthesis & Modeling - continued):***

Gruber et al. Recent highlights from the Ocean Carbon-Cycle Model Intercomparison Project (OCMIP)
Robbins & Dickson A revised method for estimating anthropogenic carbon inventories in the ocean
Moore et al. Iron Cycling and Nutrient Limitation Patterns in the World Ocean: Results from A Marine Ecosystem Model
Lima et al. Preliminary results from an ecosystem model for the North Atlantic
McGillicuddy et al. The role of mesoscale eddies in basin-scale biogeochemical budgets of the North Atlantic: Results from a high resolution (0.1 degree) simulation
Pietrafesa The Ocean Margins Program: Overview of mooring array

10:15-10:45 *Break*

10:45-12:00 **PLENARY DISCUSSION**

12:00-1:30 *Buffet Lunch*

1:30-3:00 **WG MEETINGS:**
- **Global Scale Biogeochemistry**
- **Large-scale Data Sets**
- **Functional Groups/N2 Fixation**

3:00-3:30 *Break*

3:30-5:00 **WG meetings, continued**

6:00-8:00 **** CLAMBAKE AND DINNER ****

evening **POSTERS**

Fri July 14

7:45-8:30 *Continental Breakfast*

8:30-10:15 **WRAP-UP:** 10-min reports on WG achievements; General Discussion of Community Synthesis and Modeling

10:15-10:45 *Break*

10:45-12:00 **FINAL PLENARY**

POSTERS:

Bates et al. Seasonal variability of dissolved inorganic carbon and comparative estimates of anthropogenic CO2 in the Indian Ocean
Brostrom The carbon cycle in the upper North Atlantic: A simplistic view
Brostrom Advection of plankton in GCM's, is there a potential problem?
Coles & Hood Modeling *Trichodesmium* and the impact of nitrogen fixation in the Atlantic Ocean
Dutkiewicz et al. Effect of interannual variability of mixing and light on phytoplankton abundances *(same as oral presentation)*
Garcia & Keeling On the seasonal nitrate distribution and relations to air-sea oxygen flux in the global ocean
Gordon et al. Status of nutrient data calibration for the Pacific WHP, One-time survey
Keller et al. Decadal scale trends in North Pacific nutrient and oxygen concentrations: Biological or physical explanation?

Kleypas et al. Nutrients and primary production in the mixed layer - a compilation of data collected at eight JGOFS sites
McNichol *no title provided*
Mishonov et al. Global POC synthesis from bean attenuation data collected during JGOFS, WOCE and other programs *(same as oral presentation)*
Peng et al. Distribution of bomb-produced radiocarbon in a physical-biogeochemical model of the Pacific Ocean
Sabine et al. Consistency and synthesis of Pacific Ocean CO2 survey data
Wischmeyer et al. Meridional asymmetric nutrient distribution in the equatorial Pacific upwelling system: Its role in the variability of CO2 efflux to the atmosphere