

Modeling and Synthesis of Southern Ocean Natural Iron Fertilization Workshop
June 27-29, 2011
Clark Laboratory 507, Woods Hole Oceanographic Institution
Woods Hole, Massachusetts



Sponsored by the U.S. National Science Foundation

Sunday June 26

18:00-21:00 **Icebreaker**, Matt Charette's House, 11 Gregory Lane, Falmouth MA 02540, 508-540-0005
(Light supper will be served.)

Transportation will be provided from the Sands of Time Hotel

Shuttle will depart at 6 p.m., and will circle several times to get everyone, driver's cell phone is 508-962-6815 if you arrive late and need a ride.

Monday June 27

7:30 *Continental Breakfast*
(Hang Posters)

8:30 **Introductory Remarks and Announcements**
Meng Zhou, University of Massachusetts (USA)

8:45 **Plenary Session 1. Overview of Process Studies and Modeling**
Chair: Matt Charette, Woods Hole Oceanographic Institution (USA)

8:45 Ocean Iron Fertilization
Hein de Baar, Royal Netherlands Institute for Sea Research (Netherlands)

9:15 Overview of the KEOPS Natural Iron Fertilization Study
Stephane Blain, Laboratoire d'Océanographie Microbienne (France)

9:45 Overview of the CROZEX Natural Iron Fertilization Study
Richard Sanders, National Oceanography Centre (UK)

10:15 *Break*

10:45 Overview of the Southern Scotia Sea Natural Iron Fertilization Study
Meng Zhou, University of Massachusetts (USA)

11:15 Insights into the Spatio-temporal Variability in Natural Iron Fertilization
Alessandro Tagliabue, University of Cape Town (South Africa)

11:45 FeCycle II: Quantifying the Cycling of Fe and C During a Spring Diatom Bloom
Ben Twining, Bigelow Laboratory for Ocean Sciences (USA)

12:15 *Lunch*

13:30 **Plenary Session 2. Physical Oceanographic Processes**
Chair: Meng Zhou, University of Massachusetts (USA)

13:30 Physical Processes Governing Natural Iron Fertilization in the Southern Drake Passage
Sarah Gille, Scripps Institution of Oceanography (USA)

- 13:50 Roles of Iron and Light in Limiting Phytoplankton in Island Blooms and the Wider Southern Ocean
Hugh Venables, British Antarctic Survey (UK)
- 14:10 The Role of Ocean Mixing in Southern Ocean Iron-fueled Phytoplankton Blooms: Insight from Radium Isotopes
Matt Charette, Woods Hole Oceanographic Institution (USA)
- 14:30 **Plenary Session 3. Chemical Distributions and Fluxes**
Chair: Rob Sherrell, Rutgers University (USA)
- 14:30 Potential Role of Particulate Forms of Fe in Island Fertilization in the Southern Ocean
Peter Statham, University of Southampton (UK)
- 14:50 Natural Iron Fertilization around Elephant Island: Sources and Systematics of the Added Fe
Chris Measures, University of Hawaii (USA)
- 15:10 Export Flux Dynamics during Natural Iron Fertilization: A Synthesis
Paul Morris, Woods Hole Oceanographic Institution (USA)
- 15:30 *Break*
- 16:00 **Plenary Session 4. Biological Response**
Chair: Karen Selph, University of Hawaii (USA)
- 16:00 Natural Iron Fertilization above the Kerguelen Plateau (Southern Ocean): Impact on Carbon Remineralization by the Microbial Food Web
Ingrid Obernosterer, Laboratoire d'Océanographie Microbienne (France)
- 16:20 Natural Iron Fertilisation: Extrapolating the General from the Specific?
Mark Moore, National Oceanography Centre (UK)
- 16:40 Natural vs. Artificial Pelagic Iron Fertilizations and the Structure of Planktonic Communities in High Nutrients Environments of the Southern Ocean
Bernard Queguiner, Laboratoire d'Océanographie Physique et Biogéochimique (France)
- 17:00-19:00 **Reception and Poster Session (with hors d'oeuvre and drinks sponsored by WHOI Director's Office)**

Tuesday June 28

- 8:00 *Continental Breakfast*
- 9:00 **Plenary: Organization and Charge of Disciplinary Working Groups**
Richard Sanders, National Oceanography Centre (UK)
(suggestion Biology, Chemistry, Physics)
- 9:30 **Disciplinary Working Group Discussions**
- 10:15 *Break*
- 10:45 **Disciplinary Working Group Discussions (continued)**
- 12:00 *Lunch*
- 13:30 **Plenary: Disciplinary Working Group Reports Working Group Chairs**

- 15:00 *Break*
- 15:30 **Plenary: Organization and Charge of Interdisciplinary Working Groups**
Meng Zhou, University of Massachusetts (USA)
- 16:00 **Interdisciplinary Working Group Discussions**
- 17:00 **2-minute Student Introductions and Poster Session (continued)**
- 18:00 - 21:00 ***Conference dinner (Co-sponsored by WHOI Director's Office)***
Fenno Patio or inside Buttery in case of rain

Wednesday June 29

- 8:00 *Continental Breakfast*
- 9:00 **Plenary: Interdisciplinary Working Group Reports**
Working Group Chairs
- 10:30 *Break*
- 11:00 **Plenary: Closing remarks**
Matt Charette, Woods Hole Oceanographic Institution (USA)
- 11:30 *Take-away lunch*