

# CURRICULUM VITAE

## Phoebe J. Lam

### CONTACT INFORMATION

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### EDUCATION

UC Berkeley      Ph.D. December 2005  
Department of Earth and Planetary Science  
Advisor: James K.B. Bishop

Princeton University      M.A. May 1999  
Department of Geosciences  
Advisor: François M.M. Morel

MIT      S.B. June 1997  
Environmental Engineering Science

### RESEARCH POSITIONS

*Assistant Scientist*, Department of Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution, Woods Hole, MA. (June 2007-present)

*Postdoctoral Scholar*, Department of Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution, Woods Hole, MA. Supervisor: Ken Buesseler (December 2005-May 2007)

*Graduate Student Research Assistant*, Earth Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA. Supervisor: Jim Bishop (June 2001-December 2005)

*Graduate Research Assistant*, Geosciences Department, Princeton University. Supervisor: François Morel (September 1997-May 2000)

### PUBLICATIONS

#### PEER-REVIEWED PUBLICATIONS

Buesseler, K.O., C.H. Lamborg, P.W. Boyd, P.J. Lam, T.W. Trull, R.R. Bidigare, J.K.B. Bishop, K. L. Casciotti, F. Dehairs, M. Elskens, M. Honda, D.M. Karl, D. Siegel, M.W. Silver, D.K. Steinberg, J. Valdes, B. Van Mooy and S. Wilson. Revisiting Carbon Flux through the Ocean's Twilight Zone. *Science*, 316: 567-570, DOI: 10.1126/science.1137959.

Lam, P.J. and J.K.B. Bishop. 2007. High Biomass Low Export Regimes in the Southern Ocean. *Deep Sea Research II: The Role of Marine Organic Carbon and Calcite Fluxes in Driving Climate Change, Past and Future*, 54: 601-638, DOI: 10.1016/j.dsr2.2007.01.013.

Lam, P.J., J.K.B. Bishop, C.C. Henning, M.A. Marcus, G.A. Waychunas, I.Y. Fung. 2006. Wintertime phytoplankton bloom in the Subarctic Pacific supported by continental margin iron. *Global Biogeochemical Cycles*, 20(1), GB1006, DOI: 10.1029/2005GB002557.

Lam, P.J., P.D. Tortell, and F.M.M. Morel. 2001. Differential effects of iron additions on organic and inorganic carbon production by phytoplankton. *Limnology and Oceanography*, 46(5): 1199-1202.

Rosenthal, Y., P. Lam, E.A. Boyle, and J. Thomson. 1995. Authigenic cadmium enrichments in suboxic sediments: Precipitation and postdepositional mobility. *Earth and Planetary Science Letters*, 132: 99-111.

#### **PUBLICATIONS SUBMITTED**

Lam, P.J., and J.K.B. Bishop. "The continental margin is a key source of iron to the HNLC North Pacific Ocean?" *In review* *Geophysical Research Letters*.

Lamborg, C.H. K.O. Buesseler and P.J. Lam. "Sinking fluxes of minor and trace elements in the North Pacific Ocean measured during the VERTIGO program", *Deep Sea Research II*

#### **PUBLICATIONS IN PREP**

Lam, P.J. and J.K.B. Bishop. "Community Structure, Ballast, and POC profiles in the mesopelagic Twilight Zone".

#### **OTHER PUBLICATIONS**

Lam, P.J. and S.W. Chisholm. 2002. Iron fertilization of the Oceans: Reconciling Commercial Claims with Published Models. White Paper available at:

<http://web.mit.edu/chisholm/www/publications/fefert.pdf>

#### **EXTERNAL GRANT PROPOSALS**

NSF-OCE, "Sources of iron to the eastern tropical Atlantic: does the continental margin supplement Saharan dust?", lead PI.

#### **TEACHING EXPERIENCE**

*Graduate Student Instructor*, UC Berkeley, EPS c82—Introduction to Oceans, taught by Jim Bishop and Lynn Ingram. Head GSI—coordinated activities of all (4) GSIs. Gave a guest lecture on Primary Production (~430 students); graded assignments and exams; led review sessions; held office hours (Fall 2004)

*Graduate Student Instructor*, UC Berkeley, EPS 103/203—Introduction to Marine Geochemistry, taught by Jim Bishop. Gave a guest lecture (10 students); graded assignments and exams; met extensively with students for individual help and to discuss term papers (Fall 2002)

*Assistant in Instruction*, Princeton University, ENV 202—Fundamentals of Environmental Studies, taught by Bess Ward. Led two weekly discussion sections; graded assignments and papers (Spring 2000)

*Assistant in Instruction*, Princeton University, GEO 331—Introduction to Geochemistry, taught by François Morel. Graded assignments and exams; met with students individually for help (Fall 1998)

#### **ADVISING EXPERIENCE**

*Class advisor*, Co-advisor to the MIT-WHOI Joint Program incoming class of graduate students (August 2007-present)

*Summer Research Advisor*, 1st year MIT-WHOI Joint Program student Jong-Mi Lee. (Summer 2007)

*Mentor*, to undergraduate research assistants during synchrotron beamtime, UC Berkeley (Sept 2004, Dec 2003, April 2002)

*Mentor*, Lawrence Berkeley National Lab High School Summer Research Program (Summer 2002, 2003)

## SELECTED PRESENTATIONS AND CONFERENCES

### TALKS

- Dept. of Estuarine and Ocean Sciences seminar series, School of Marine Science and Technology, University of Massachusetts, Dartmouth, October 24, 2007. (Invited)
- Gordon Research Conference on Chemical Oceanography, Tilton, NH. August 5-10, 2007. (Invited)
- Geochemistry Division Seminar, Lamont-Doherty Earth Observatory of Columbia University. April 4, 2007. (Invited)
- Dept. of Earth Sciences, University of New Hampshire. April 2, 2007. (Invited)
- School of Earth and Atmospheric Sciences, Georgia Tech. March 15, 2007. (Invited)
- Dept. of Oceanography, SOEST, University of Hawaii. November 2, 2006. (Invited)
- E34 Oceanography and Geobiology Seminar, Dept. of Earth, Atmospheric, and Planetary Science. MIT. October 20, 2006. (Invited)
- Dept. of Civil and Environmental Engineering Seminar. MIT. April 4, 2006. (Invited)
- AGU/ASLO/TOS Ocean Sciences Meeting, Honolulu, HI. Feb 20-24, 2006.
- Marine Chemistry and Geochemistry Seminar Series. Woods Hole Oceanographic Institution. January 31, 2006.
- AGU Chapman Conference on Marine Organic Carbon and Calcite Fluxes, Woods Hole Oceanographic Institution. July 2005. (Invited)
- Department of Earth and Planetary Science, McGill University, Montreal, Canada. April 18, 2005. (Invited)

### POSTERS

- AGU—Fall Meeting, San Francisco, CA. Dec 13-17, 2004.
- JGOFS Open Science Conference, Washington, D.C. May 5-8, 2003.
- ASLO winter meeting, Santa Fe, NM. Feb 1999.

### WORKSHOPS

- Participant*, “Communicating Ocean Sciences” Workshop, Woods Hole Oceanographic Institution, Woods Hole, MA (October 19, 2007).
- Participant*, International GEOTRACES Pacific Basin Planning Workshop, University of Hawaii, Manoa, Honolulu, HI (June 26-28, 2007).
- Participant*, Alternative Sampling Platforms in the Antarctic workshop, Washington, DC (August 2-3, 2006)
- Participant*, Dissertations Symposium on Chemical Oceanography (DISCO XIX), Waikoloa, HI (May 1-7, 2005)
- Participant*, US GEOTRACES Planning Workshop, Lamont Doherty Earth Observatory, Palisades, NY (May 22-25, 2004).
- Student Participant*, Synchrotron Techniques for Environmental Microbiology and Biogeochemistry, Joint ALS-SSRL Workshop, SLAC, Menlo Park, CA (Oct. 8, 2003)
- Student Participant*, GS/MSA Short Course: Applications of Synchrotron Radiation in Low-Temperature Geochemistry and Environmental Science, Monterey, CA (Dec 4-5, 2002)
- Student Participant*, NATO Advanced Study Institute on Ocean Carbon Cycle and Climate, Ankara, Turkey (Aug 5-16, 2002)
- Student Participant*, MBL Summer Course: “Physiology: Cellular and Molecular Biology”, Marine Biological Laboratory, Woods Hole, MA (June 14-July 25, 1998)

### CRUISE PARTICIPATION (~181 DAYS AT SEA)

- R/V Knorr, Nov-Dec 2007 (28 days), Tropical South Atlantic, CoFeMUG, Geochemistry of particles
- Aurora Australis, Jan-Feb 2007 (34 days), Southern Ocean, Subantarctic Zone Sensitivity Study.

R/V R.H. Brown, June-July 2003 (22 days), North Atlantic (A16N-leg 1), Particulate inorganic carbon sensor testing and calibration.  
R/V Gordon Sproul, August 2003 (2 days), California Current, Carbon sensor development.  
R/V Roger Revelle, Jan-Feb 2002 (40 days), Southern Ocean, Southern Ocean Iron Enrichment Experiment (SOFeX)—large volume filtration.  
R/V New Horizon, Aug 2001 (14 days), California Current, Transect of coastal to oligotrophic waters—large volume filtration.  
CCGS J.P. Tully, Aug-Sep 1999 (20 days), Subarctic Pacific (Lines P & Z), Coccolithophore response to trace metal additions.  
R/V Edwin Link, June 1999 (7 days), Gulf of Maine, Coccolithophore response to pCO<sub>2</sub> and trace metals.  
R/V Oceanus, June 1996 (14 days), Sargasso Sea, Picoplankton and copper stress.

### **OTHER PROFESSIONAL EXPERIENCE**

*Reviewer*, Deep Sea Research I, Deep Sea Research II, Geophysical Research Letters, Global Biogeochemical Cycles, Journal of Geophysical Research—Oceans, Limnology and Oceanography.

*Vice President*, WHOI Post-Doctoral Association (October 31, 2006—May 31, 2005)

*Radio Interview*, “Science in Action” with Gareth Mitchell, on iron fertilization in the ocean. Broadcast April 23, 2004 on BBC World Service.

*Co-organizer*, Earth and Planetary Science Department Fall 2002 Speakers Program, UC Berkeley (Fall 2002)

*Intern*, Oceans Program, Environmental Defense, Oakland, CA (Sept 2000-May 2001)

### **AWARDS AND SCHOLARSHIPS**

Woods Hole Oceanographic Institution Postdoctoral Award, December 2005  
Outstanding Student Paper Award, AGU, Ocean Sciences Section, San Francisco, CA, Dec 2004  
Student Travel Award, ASLO/TOS Ocean Research Conference, Honolulu, HI, Feb 2004  
Student Travel Award, JGOFS Open Science Conference, Washington, D.C., May 2003  
Student Travel Award, NATO ASI, Ankara, Turkey, Aug 2002  
Graduate Opportunity Program Award, UC Berkeley, 2000-2001  
NSERC Postgraduate Scholarship A, 1998-2000  
Scholarship Award, the Society of General Physiologists, Marine Biological Laboratory, 1998  
1<sup>st</sup> Year Merit Fellowship in Natural Sciences and Mathematics, Princeton University, 1997-98  
Richard Lee Russel Award, Dept. of Civil and Environmental Engineering, MIT, 1997

### **PROFESSIONAL SOCIETIES**

American Geophysical Union  
American Society of Limnology and Oceanography  
Elected to Sigma Xi, MIT, June 1997  
Elected to Tau Beta Pi, MIT, May 1996  
Elected to Chi Epsilon (Civil Engineering Honor Society), MIT, Apr 1996

### **OTHER**

Born September 24, 1976 in Montreal, Canada  
US Permanent Resident Alien since January 1999 (Canadian citizen)  
Fluent in English and French (spoken and written) and Mandarin Chinese (spoken)