


U.S. GEOTRACES



PACIFIC WORKSHOP

12 – 14 September 2011

Sheraton La Jolla Hotel

Organizers:

Bob Anderson, Lamont-Doherty Earth Observatory of Columbia University

Kathy Barbeau, Scripps Institution of Oceanography/UC San Diego

Jim Moffett, University of Southern California

Chris German, Woods Hole Oceanographic Institution

Greg Cutter, Old Dominion University

Conference Materials

- Workshop Objectives 2**
- Call for Advocacy Talks 3**
- Project Summary for the Management Proposal 4**
- Agenda 5**
- Participants List 8**

Objectives

Primary Objective

Solicit a collection of strong proposals, submitted to the Core Program for the February 15 deadline that cover the core parameters and other parameters identified as priorities at the workshop and by the SSC.

Role of Workshop

Each proposal will be evaluated independently in a highly competitive core panel and must be exciting in its own right. The workshop will provide participants with information about the aspects of the cruise track that made it compelling, and ancillary information that will strengthen the proposal. Most importantly, each proposal must show that it contributes to the project as a whole, and could not achieve its objectives without the measurement of other core parameters. Proposals that deal exclusively with the parameter being measured will not be competitive. We will provide as many opportunities as possible for participants to identify synergies with other groups that can be used to strengthen their proposals. We will also provide information about data management, logistics, costs and infrastructural resources provided by the management grant so that participants will be develop realistic budgets and project management schemes. Logistics will enable us to identify at the workshop what sampling plans are logistically feasible, to avoid proposals being funded that we cannot accommodate.

Advocacy Talks

Advocacy talks are solicited from participants who wish to present. While not mandatory, they will be useful to inform the workshop participants about how specific groups plan to participate in the section. Each presentation is limited to 3 PowerPoint slides and 5 minutes. These presentations will be on the first day, and if necessary, on Tuesday morning as well, because they provide information that will be important in the subsequent planning activities in the rest of the meeting. It is also hoped that they will stimulate informal discussions about synergies amongst participants that will result in stronger proposals.

Project Summary

Intellectual Merit: The mission of the GEOTRACES Program (www.geotraces.org) is “to identify processes and quantify fluxes that control the distributions of key trace elements and isotopes in the ocean, and to establish the sensitivity of these distributions to changing environmental conditions” (GEOTRACES Science Plan, 2006). This proposal seeks the necessary core funding to implement a zonal transect in the eastern tropical South Pacific (ETSP) from Peru to Tahiti as the second cruise of the US GEOTRACES Program. The section includes a large area characterized by high rates of primary production and particle export in the eastern boundary associated with the Peru Upwelling, a large oxygen minimum zone that is a major global sink for fixed nitrogen, and a large hydrothermal plume arising from the East Pacific Rise. This section was selected as a result of open planning workshops in 2007 and 2008, with a final recommendation made by the US GEOTRACES Steering Committee in 2009. The section is the first part of a two stage plan that will include a meridional section of the Pacific from Tahiti to Alaska as a subsequent expedition. This proposal is to provide the essential support and management structure for acquiring the trace elements and isotopes samples listed as core parameters in the GEOTRACES Science Plan, plus hydrographic and nutrient data needed by participating investigators. The objectives are (1) plan and coordinate a 52 day research cruise; (2) obtain representative samples for a wide variety of TEIs using conventional CTD/rosette and GEOTRACES Sampling Systems (GO Flo bottles on contamination-free carousel, Kevlar conducting cable, etc); (3) acquire “conventional” hydrographic data (CTD, transmissometer, fluorometer, oxygen sensor, etc) along with discrete samples for salinity, dissolved oxygen (to 1 μM detection limits), plant pigments, redox tracers such as ammonium and nitrite, and dissolved nutrients at micro- and nanomolar levels; (4) ensure that proper QA/QC protocols are followed and reported, as well as fulfilling all GEOTRACES Intercalibration protocols; (5) prepare and deliver all hydrographic-type data to the GEOTRACES Data Center (and US data centers); and (6) coordinate all cruise communications between other investigators, including preparation of a hydrographic report/publication.

Broader Impacts: The project is part of an international collaborative program that has forged strong partnerships in the intercalibration and implementation phases that is unprecedented in chemical oceanography. The science product of these collective missions will enhance our ability to understand how to interpret the chemical composition of the ocean, and interpret how climate change will affect ocean chemistry. Partnerships include contributions to the infrastructure of developing nations with overlapping interests in the study area, in this case Peru. There is a strong educational component to the program, with many Ph.D. students carrying out thesis research within the program.

U.S. GEOTRACES PACIFIC WORKSHOP

12 – 14 September 2011 / Sheraton La Jolla Hotel

Organizers: Bob Anderson, Kathy Barbeau, Jim Moffett, Chris German and Greg Cutter

MONDAY, SEPTEMBER 12

TIME	TOPIC	SPEAKER(S)	ROOM(S)	DURATION
0730	<i>Continental Breakfast</i>		Village Ballroom	(30 min.)
0830	Local Logistics, Travel Reimbursements, Objectives of the Workshop	Kathy Barbeau Bob Anderson	Village Ballroom	(10 min.)
0840	Biogeochemical Features of the ETSP – Peru Upwelling System	Jim Moffett	Village Ballroom	(45 min.)
0930	Hydrothermal Plume	Chris German	Village Ballroom	(45 min.)
1015	<i>Coffee Break</i>		Village Ballroom	(30 min.)
1045	Physical Oceanography of the Eastern Tropical Pacific	Lynne Talley	Village Ballroom	(30 min.)
1115	Boundary Exchange and deep Ocean Processes	Bob Anderson	Village Ballroom	(40 min.)
1200	<i>Lunch</i> (boxed lunches will be provided)		The Grove	(60 min.)
1300	Relationship to other Programs: International GEOTRACES	Bob Anderson	Village Ballroom	(10 min.)
1310	Relationship to other Programs German and French Programs in 2013	Mark Altabet	Village Ballroom	(20 min.)
1330	Advocacy Talks	Participants	Village Ballroom	(120 min)
1530	<i>Coffee Break</i>		Village Ballroom	(30 min)
1600	Advocacy Talks (continued)	Participants	Village Ballroom	(90 min)

Second Floor meeting rooms: **Village Ballroom** is the plenary meeting room & **Executive** is a breakout room.
 First Floor breakout room: **Wind & Sea.**

U.S. GEOTRACES PACIFIC WORKSHOP

12 – 14 September 2011 / Sheraton La Jolla Hotel

Organizers: Bob Anderson, Kathy Barbeau, Jim Moffett, Chris German and Greg Cutter

TUESDAY, SEPTEMBER 13

TIME	TOPIC	SPEAKER(S)	ROOM(S)	DURATION
0700	<i>Continental Breakfast</i>		Village Ballroom	(60 min.)
0800	Advocacy Talks (continued)	Participants	Village Ballroom	(120 min.)
1000	<i>Coffee Break</i>		Village Ballroom	(15 min.)
1015	Plenary Discussion Key and non-key parameters. Charge to breakout groups: identification of priorities within each “sub-program” of the cruise and integration.	Jim Moffett Chris German (Discussion Leaders)	Village Ballroom	(30 min.)
1045	Breakout Session 1 Operational definition of three sub-programs within the cruise. a) Chemical processes related to the intense OMZ b) Sources and sinks of TEIs related to the hydrothermal plume c) TEI relationships to the high-amplitude gradient in primary production along the section (this involves both sources and sinks)		Wind & Sea (1st Floor) Executive (2nd Floor)	(75 min.)
1200	Working Lunch (boxed lunches will be provided)		Wind & Sea (1st Floor) Executive (2nd Floor)	(90 min.)
1330	Reports from Breakout Groups Plenary Discussion Integration of the three “sub-programs” discussed in the breakout groups [some of this will open the door for the logistics section] Prioritization of the “other” parameters		Village Ballroom	(30 min.)
1400	Breakout Session 2 Sampling needs and sampling systems. a) Trace metal b) McLane Pumps c) Ship’s rosette d) Other samplers		Wind & Sea (1st Floor) Executive (2nd Floor)	(90 min.)
1530	<i>Coffee Break</i>		Village Ballroom	(30 min)
1600	Reports from Breakout Groups		Village Ballroom	(90 min)

Second Floor meeting rooms: **Village Ballroom** is the plenary meeting room & **Executive** is a breakout room.
First Floor breakout room: **Wind & Sea.**

U.S. GEOTRACES PACIFIC WORKSHOP

12 – 14 September 2011 / Sheraton La Jolla Hotel

Organizers: Bob Anderson, Kathy Barbeau, Jim Moffett, Chris German and Greg Cutter

WEDNESDAY, SEPTEMBER 14

TIME	TOPIC	SPEAKER(S)	ROOM(S)	DURATION
0700	<i>Continental Breakfast</i>		Village Ballroom	(60 min.)
0800	Logistics: What we learned from the NAZT Cruise	Greg Cutter	Village Ballroom	(30 min.)
0830	Logistics: What the management proposal will and won't do.	Jim Moffett	Village Ballroom	(15 min.)
0845	Role of ODF	Jim Swift	Village Ballroom	(30 min.)
0915	Plenary Discussion Logistics and Budget	Greg Cutter (Discussion Leader)	Village Ballroom	(45 min.)
1000	<i>Coffee Break</i>		Village Ballroom	(30 min.)
1030	Breakout Groups: Sampling Logistics – TM Rosette – Ships Rosette – McLane Pumps – Other Samplers	Greg Cutter (Discussion Leader)	Wind & Sea (1st Floor) Executive (2nd Floor)	(90 min.)
1200	<i>Lunch</i> (boxed lunches will be provided)		The Grove	(60 min.)
1300	Plenary Discussion Recommendations for Management Team: Cruise Track and sampling intervals	Bob Anderson (Discussion Leader)	Village Ballroom	(90 min.)
1430	Data Management	Chris German	Village Ballroom	(30 min.)
1500	<i>Coffee Break</i>		Village Ballroom	(15 min)
1515	Plenary Discussion (continued) Recommendations for Management Team: Logistics	Bob Anderson (Discussion Leader)	Village Ballroom	(45 min)
1600	Meeting Ends			

Second Floor meeting rooms: **Village Ballroom** is the plenary meeting room & **Executive** is a breakout room.
First Floor breakout room: **Wind & Sea.**

Pacific Planning Meeting @ SIO/UCSD, September 12 - 14, 2011

Participants List

SURNAME	FIRSTNAME	AFFILIATION	EMAIL
Altabet	Mark	U Massachusetts Dartmouth	maltabet@umassd.edu
Anderson	Robert	Lamont-Doherty Earth Obs. of Columbia University	boba@ldeo.columbia.edu
Barbeau	Kathy	Scripps Institution of Oceanography/UC San Diego	kbarbeau@ucsd.edu
Baskaran	Mark	Wayne State University	Baskaran@wayne.edu
Boyle	Ed	Massachusetts Institute of Technology	eaboyle@mit.edu
Brenner	Elizabeth	Scripps Institution of Oceanography	ebrenner@ucsd.edu
Bruland	Kenneth	University of California Santa Cruz	bruland@ucsc.edu
Brzezinski	Mark	University of California Santa Barbara	mark.brzezinski@lifesci.ucsb.edu
Buck	Clifton	University of California Santa Cruz	cliftonsuck@gmail.com
Buck	Kristen	Bermuda Institute of Ocean Sciences	kristen.buck@bios.edu
Casciotti	Karen	Stanford University	kcasciot@stanford.edu
Charette	Matt	Woods Hole Oceanographic Institution	mcharette@whoi.edu
Charles	Christopher	Scripps Institution of Oceanography	ccharles@ucsd.edu
Chaves	Joaquin	NASA	joaquin.chaves@ssaihq.com
Church	Tom	University of Delaware	tchurch@udel.edu
Cutter	Greg	Old Dominion University	gcutter@odu.edu
Dickson	Andrew	Scripps Institution of Oceanography/UC San Diego	adickson@ucsd.edu
Dufour	Rose	Scripps Institution of Oceanography	rdufour@ucsd.edu
Fine	Rana	RSMAS/University of Miami	rfine@rsmas.miami.edu
Flegal	Russ	University of California Santa Cruz	flegal@ucsc.edu
Gallon	Celine	University of California Santa Cruz	gallon@metx.ucsc.edu
German	Christopher	Woods Hole Oceanographic Institution	cgerman@whoi.edu
Goldstein	Steve	Lamont-Doherty Earth Obs. of Columbia University	steveg@ldeo.columbia.edu
Haley	Brian	Oregon State University	bhaley@coas.oregonstate.edu
Hammerschmidt	Chad	Wright State University	chad.hammerschmidt@wright.edu
Hammond	Doug	University of Southern California	dhammond@usc.edu
Hayes	Christopher	Lamont-Doherty Earth Obs. of Columbia University	cth@ldeo.columbia.edu
John	Seth	University of South Carolina	sjohn@geol.sc.edu
Kadko	David	RSMAS/University of Miami	dkadko@rsmas.miami.edu
Kenna	Tim	Lamont-Doherty Earth Obs. of Columbia University	tkenna@ldeo.columbia.edu
Lam	Phoebe	Woods Hole Oceanographic Institution	pjlam@whoi.edu
Landing	William	Florida State University	wlanding@fsu.edu
Letscher	Rob	RSMAS/University of Miami	rletscher@rsmas.miami.edu
Lupton	John	NOAA-PMEL-VENTS	john.e.lupton@noaa.gov
McManus	James	Oregon State University	mcmanus@coas.oregonstate.edu
Metz	Simone	National Science Foundation	smetz@nsf.gov
Moffett	James	University of Southern California	jmoffett@usc.edu
Moore	J. Keith	University of California Irvine	jkmoore@uci.edu
Moran	Bradley	University of Rhode Island	moran@gso.uri.edu

Pacific Planning Meeting @ SIO/UCSD, September 12 - 14, 2011**Participants List**

SURNAME	FIRSTNAME	AFFILIATION	EMAIL
Morton	Peter	Florida State University	pmorton@fsu.edu
Murray	Rick	Boston University	rickm@bu.edu
Pena	Leo	Lamont-Doherty Earth Obs. of Columbia University	leopoldo@ldeo.columbia.edu
Resing	Joseph	NOAA-PMEL-JISAO-U.of Washington	Joseph.Resing@noaa.gov
Rice	Don	National Science Foundation	drice@nsf.gov
Saito	Mak	Woods Hole Oceanographic Institution	msaito@whoi.edu
Schatzman	Courtney	Scripps Institution of Oceanography/UC San Diego	cschatzman@ucsd.edu
Sedwick	Peter	Old Dominion University	psedwick@odu.edu
Severmann	Silke	Rutgers University	silke@marine.rutgers.edu
Sherrell	Robert	Rutgers University	sherrell@marine.rutgers.edu
Stewart	Gillian	CUNY, Queens College	Gillian.Stewart@qc.cuny.edu
Sutherland	Woody	Scripps Institution of Oceanography/UC San Diego	woodys@ucsd.edu
Swift	James	Scripps Institution of Oceanography/UC San Diego	jswift@mail.ucsd.edu>
Talley	Lynne	Scripps Institution of Oceanography/UC San Diego	ltalley@ucsd.edu
Twining	Benjamin	Bigelow Laboratory for Ocean Sciences	btwining@bigelow.org
Wu	Jingfeng	RSMAS/University of Miami	jwu@rsmas.miami.edu