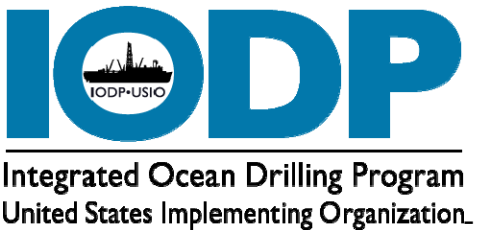
IODP
INTEGRATED OCEAN
DRILLING PROGRAM



INTEGRATED OCEAN DRILLING PROGRAM
United States Implementing Organization

FY10 Quarterly Report 3

1 April–30 June 2010

NSF Contract OCE-0352500

IODP-MI Contract IODP-MI-05-03

Submitted by the USIO

to

The National Science Foundation

and

IODP Management International, Inc.

13 August 2010

TABLE OF CONTENTS

INTRODUCTION

The organization of this quarterly report reflects activities and deliverables that are outlined in the Integrated Ocean Drilling Program (IODP) U.S. Implementing Organization (USIO) FY10 Annual Program Plan as implemented by the USIO, which comprises the Consortium for Ocean Leadership, Inc. (Ocean Leadership), and its partners, Texas A&M University (TAMU) and Lamont-Doherty Earth Observatory (LDEO) of Columbia University.[1]

MANAGEMENT AND ADMINISTRATION

Contractual Activities

Ocean Leadership

Contract Activity

Ocean Leadership received the following modifications during the reporting period.

IODP-MI Subcontract IODP-MI-05-03 with Ocean Leadership:

- Modification 27: Provided $1,000,000 in incremental funding toward FY10 science operating costs (SOC) Nonoperations activities.

Subcontract Activity

Ocean Leadership issued the following subcontract modifications during the reporting period.

Ocean Leadership Subcontract JSC 4-03 with LDEO:

- Modification 38: Approved the revised FY10 Annual Program Plan Appendix submitted 4 December 2009 for $7,079,453 and added $283,412 for Program unobligated carryforward and $160,356 for the Multisensor Magnetometer Module (MMM) project; approved shifting $174,496 previously funded in FY09 to FY10 unobligated funds; deobligated FY09 unobligated SOC Nonoperations funding in the amount of $39,821; and reduced FY09 funding from $7,015,627 to $6,801,310.
- Modification 39: Provided $183,201 in incremental funding toward FY10 SOC Nonoperations activities.

Ocean Leadership Subcontract JSC 4-02 with TAMRF:

- Modification 50: Provided $721,572 in incremental funding toward FY10 SOC Nonoperations activities.

LDEO

Miscellaneous Activity

- 12 April: Submitted a request for approval to Ocean Leadership for disposal of a pneumatic shock machine.

TAMRF

Subcontract Activity

Texas A&M Research Foundation (TAMRF) issued the following subcontract modifications during the reporting period.

[1] In this document, references to TAMU include Texas A&M Research Foundation (TAMRF).

TAMRF Subcontract with Overseas Drilling Limited:

- Modification 9: Incorporated the approved (revised) Small Business Plan and provided incremental funding.
- Modification 10: Modified Special Provision 30: Reimbursable Items of Subcontractor, which addresses catering and cleaning services, freight/transportation costs, and travel costs.

Contracts/Procurement Activity ($100,000 or Greater)

- 15 April: Issued a purchase order in the amount of $533,418 for swellable and inflatable packers.

Miscellaneous Activity

- 11 April: Submitted a request for prior approval to Ocean Leadership for the purchase of swellable and inflatable packers in the amount of $533,418.
- 30 April: Submitted TAMRF's Small Business Reports for platform operating costs (POC) and SOC to Ocean Leadership.

Personnel Status

Ocean Leadership

No positions were vacated during the quarter.

The following position was opened and advertised during the quarter:

- Administrative Assistant, Deep Earth Academy (part-time)

The following position was filled during the quarter:

- Administrative Assistant, Deep Earth Academy (Katie Golied): 3 May 2010

LDEO

No positions were vacated, opened, advertised, or filled during the quarter.

TAMU

The following positions were vacated during the quarter:

- IODP Materials Technician (Pat Thompson): 30 April 2010

The following positions were opened and advertised during the quarter:

- Marine Laboratory Specialist
- Graphics Specialist II
- Materials Technician
- Systems Analyst II
- Temporary Research Assistant

The following positions were filled during the quarter:

- Graphics Specialist II (Laura Koehler): 19 April 2010

- Manager of Business Services (Bill Wasson): 15 June 2010
- Temporary Research Assistant (John Dorsey): 9 June 2010

USIO Web Services

Web Site Statistics

Where possible, visits by USIO employees and search engine spiders were filtered out.

USIO Web Site

The USIO Web site is hosted at TAMU, LDEO, and Ocean Leadership. In addition to internal USIO Web page updates and additions, new content is regularly added to IODP expedition Web pages at http://iodp.tamu.edu/scienceops/expeditions.html.

FY10 Q3 USIO Web Site				
Parameter	**www.iodp-usio.org**	**iodp.ldeo.columbia.edu**	**iodp.tamu.edu**	**Total**
Page views	16,487	7,742	238,238	262,467
Site visits	10,299	1,138	46,077	57,514

IODP Publications Web Site

The IODP Publications Web site is hosted at TAMU. New online publications are shown in the **"Publications"** section of this report.

FY10 Q3 IODP Publications Web Site	
Parameter	**publications.iodp.org**
Page views	**174,545**
Site visits	**30,064**

USIO Educational Web Sites

FY10 Q3 Deep Earth Academy Web Sites*		
Web domain	**www.joidesresolution.org**	**www.oceanleadership.org/education/deep-earth-academy**
Page views	30,376	10,342
Site visits	9,621	6,838

*Ocean Leadership's educational Web sites are funded jointly by the USIO and USSSP.

Legacy Web Sites

The Ocean Drilling Program (ODP) Science Operator Web site and the Deep Sea Drilling Project (DSDP) Publications Web site are hosted at TAMU. The ODP Legacy Web site is hosted at Ocean Leadership.

	FY10 Q3 ODP Web Site			FY10 Q3 DSDP Web Site
Parameter	**www-odp.tamu.edu**	**www.odplegacy.org**	**Total ODP**	**www.deepseadrilling.org**
Page views	1,014,990	9,666	1,024,656	241,689
Site visits	244,511	4,139	248,650	24,561

Stakeholder Web Sites

New and updated Web pages	Release date	URL
JOIDES Resolution Transocean	ongoing	http://deepwater.com/fw/main/JOIDES-Resolution-128.html
JOIDES Resolution TAMU College of Geosciences	ongoing	http://geosciences.tamu.edu/communications/geosciences-highlights/ocean-drilling
TAMU ODASES*	ongoing	http://odases.tamu.edu/

*Web site hosting for the TAMU ODASES Web site was transferred to the TAMU Geosciences Web server at the end of FY10 Q3.

Other Activities

Laboratory System Review Team

The USIO initiated a review of the shipboard laboratory systems to comply with National Science Foundation (NSF) Contract OCE-0352500 requirements regarding evaluation of USIO operations every three years. The Laboratory System Review Team, a team of external experts from the scientific ocean drilling community, met on board the *JOIDES Resolution* from 27 through 29 June 2010 and conducted an evaluation of the ship's science laboratory systems and data handling capabilities after completion of a full year of operations. The team will help set priorities to improve science laboratory systems and data handling capabilities and will provide recommendations to improve USIO operations effectiveness.

National Research Council Committee on Scientific Ocean Drilling

USIO staff provided an overview of IODP structure and operations to the National Research Council (NRC) ad hoc committee on scientific ocean drilling at their first open session, which took place 21 and 22 June 2010 in Washington, DC. Information about the NRC project titled "Review of the Scientific Accomplishments and Assessment of the Potential for Future Transformative Discoveries with U.S.-Supported Scientific Ocean Drilling" is available at http://www8.nationalacademies.org/cp/projectview.aspx?key=49222.

TECHNICAL, ENGINEERING, AND SCIENCE SUPPORT

USIO Expedition Schedule

Expedition		Port (Origin)	Dates[1, 2]	Total Days (Port/ Sea)	Days at Sea (Transit[3]/ Ops)	Co-Chief Scientists	USIO Contacts[4]
Juan de Fuca Hydrogeology	327	Victoria, British Columbia, Canada	5 July–5 September 2010	62 (5/57)	57 (2/55)	A. Fisher, T. Tsuji	TAMU: K. Petronotis* LDEO: S. Mrozewski^
Cascadia ACORK	328	Victoria, British Columbia, Canada	5 September–19 September 2010	14 (5/9)	9 (2/7)	E. Davis	TAMU: M. Malone*
Transit	N/A	Victoria, British Columbia, Canada	19 September–9 October 2010	20 (2/18)			
South Pacific Gyre Microbiology	329	Papeete, Tahiti	9 October–13 December 2010	65 (4/61)	61 (9/52)	S. D'Hondt, F. Inagaki	TAMU: C. Alvarez-Zarikian* LDEO: H. Evans^
Louisville Seamount Trail	330	Auckland, New Zealand	13 December 2010–12 February 2011	61 (5/56)	56 (8/48)	A. Koppers, T. Yamazaki	TAMU: J. Geldmacher* LDEO: J. Inwood^
Transit		Auckland, New Zealand	12 February–16 March 2011	31 (5/26)			
Costa Rica Seismogenesis Project	334	Puntarenas, Costa Rica	15 March–14 April 2011	30 (2/28)	28 (3/25)	P. Vannucchi, K. Ujiie	TAMU: K. Gamage* LDEO: A. Malinverno^
Superfast Spreading Rate Crust 4[5]	335	Balboa, Panama	14 April–4 June 2011	51 (4/47)	47 (8/39)	D. Teagle, B. Ildefonse	TAMU: P. Blum* LDEO: G. Guerin^
Non-IODP							
Mid-Atlantic Ridge Microbiology	336	Bridgetown, Barbados	Mid-September–mid-November 2011	64 (4/60)	60 (10/50)	K. Edwards, W. Bach	TAMU: A. Klaus* LDEO: L. Anderson^

Notes: TBD = to be determined; N/A = not applicable.
[1] Dates for expeditions may be adjusted pending non-IODP activities.
[2] The start date reflects the initial port call day. The vessel will sail when ready.
[3] Transit total is the transit to and from port call and does not include transit between sites.
[4] The USIO contact list includes both the Expedition Project Manager (*), who is the primary contact for the expedition, and the Logging Staff Scientist (^). In addition, further expedition information can be obtained at www.iodp-usio.org.
[5] End port is Colon, Panama.

Expedition Planning and Implementation Activities

USIO Shatsky Rise Formation Expedition

Postexpedition Activities

USIO staff prepared for and hosted the first Expedition 324: Shatsky Rise Formation postexpedition meeting held 26–30 April 2010 in College Station, Texas.

USIO Canterbury Basin Sea Level Expedition

Postexpedition Activities

The State Department was notified that the *Preliminary Report* was published, thereby satisfying one of the requirements for operating in New Zealand waters.

USIO Wilkes Land Glacial History Expedition

Postexpedition Activities

USIO staff prepared for and hosted the first Expedition 318: Wilkes Land Glacial History postexpedition meeting held 16–20 June and the sampling party held 21–26 June 2010 in College Station, Texas. In addition, the USIO hosted a special sample and measurement party held 27 June–2 July 2010 on the *JOIDES Resolution* in Victoria, British Columbia, to sample cores from the Adelie Drift that were collected but could not be adequately sampled during Expedition 318: Wilkes Land Glacial History.

USIO Juan de Fuca Hydrogeology Expedition

Expedition Planning

An engineering status meeting was held with a Co-Chief Scientist, third-party engineer, and USIO Juan de Fuca Expedition staff on 1 April 2010 in College Station, Texas. Final circulation obviation retrofit kit (CORK) plumbing designs were received from proponents and work on completion hardware entered the final stages.

The USIO received notification two days before scheduled delivery in mid-June that CORK packers would be one month late. USIO engineering staff worked with the vendor to resolve uncertainty with a third-party vendor and reduced the late delivery by one week. USIO staff secured expedited trucking to Washington and a supply boat to ship the packers and related hardware to the *JOIDES Resolution* after it leaves port.

Final preparations for technical and logistical support of the expedition continued throughout the quarter.

Expedition Staffing

Expedition Science Party Staffing Breakdown	
Member Country/Consortium	**Juan de Fuca Hydrogeology**
USA: United States Science Support Program (USSSP)	8
Japan: Japan Drilling Earth Science Consortium (J-DESC)	3
Europe and Canada: European Consortium for Ocean Research Drilling (ECORD) Science Support and Advisory Committee (ESSAC)	6
South Korea: Korea Integrated Ocean Drilling Program (K-IODP)	0
People's Republic of China: IODP-China	1
Australia and New Zealand: Australia-New Zealand IODP Consortium (ANZIC)	0
India: Ministry of Earth Science (MoES)	0

All nominations from ECORD and J-DESC were invited. No nominations were received from K-IODP, ANZIC, or India.

Clearance and Permitting Activities

Approval to operate in the Canadian Exclusive Economic Zone was received 23 June 2010. No observer was required.

USIO Cascadia ACORK Expedition

Expedition Planning

Work continued on advanced CORK (A-CORK) head design changes and drawings and a vendor was found for the 10-3/4 inch casing screen. ACORK hardware completion is expected in early August 2010. Site sheets and associated data were submitted to the Environmental Protection and Safety Panel (EPSP) and TAMU Safety Panel and approval was recommended.

Expedition Staffing

Two scientists from the proponent group accepted invitations to sail. Actions were taken to finalize the School of Rock positions, which will include 18 teachers, 5 instructors, and 1 support staff (see **"Educational Outreach"** in "Education" for more information).

Clearance and Permitting Activities

The USIO has not yet received a response to the clearance application that was submitted to Canada last quarter for Cascadia ACORK operations.

USIO South Pacific Gyre Expedition

Expedition Planning

The radioisotope van was installed on the *JOIDES Resolution* and planning efforts focused on identifying unique needs of the Science Party. A request for an extra 100 m depth penetration at the three basement sites was submitted to the EPSP and TAMU Safety Panel and approval was recommended.

Expedition Staffing

The twenty-eight Science Party quota positions were filled during the quarter, but two additional scientific positions beyond the quota are required to meet basic shipboard needs.

Clearance and Permitting Activities

Although this expedition will operate in international waters, New Zealand requires submission of a port call application. A port call application for the end port was submitted and is pending.

USIO Louisville Seamount Trail Expedition

Expedition Planning

Planning continued on all fronts, including efforts associated with meeting requirements for the third-party Goettingen tri-axial borehole magnetometer (GBM). The Logging Staff Scientist worked with scientists from Germany and LDEO and Schlumberger engineers in preparation for deploying the GBM. Testing of the tool at a Schlumberger facility prior to deployment on the *JOIDES Resolution* was scheduled for 2 August 2010.

The three additional sites identified at the pre-expedition meeting last quarter were submitted to the EPSP and TAMU Safety Panel and approval was recommended.

Expedition Staffing

Scientific staffing was completed with a total of 27 scientists accepting invitations.

Clearance and Permitting Activities

Although this expedition will operate in international waters, New Zealand requires submission of a port call application for the beginning and end port. The port call applications were submitted and are pending.

USIO Costa Rica Seismogenesis Project Expedition

Expedition Planning

The Expedition 334: Costa Rica Seismogenesis Project (CRISP) pre-expedition meeting was held 20 and 21 May 2010 in College Station, Texas. Co-Chief Scientists and the USIO project team worked on finalizing the *Scientific Prospectus* draft for submission to IODP Publication Services.

USIO Superfast Spreading Rate Crust 4 Expedition

Expedition Planning

IODP-MI requested feasibility information in support of extending Expedition 335: Superfast Spreading Rate Crust 4 by two weeks based on a request from the proponents. The USIO provided a first-order operational impact and cost estimate in time for the Science Advisory Structure Executive Committee (SASEC) meeting.

USIO Mid-Atlantic Ridge Microbiology Expedition

Expedition Planning

The Expedition 336: Mid-Atlantic Ridge Microbiology pre-expedition meeting was held 10 and 11 June 2010 in College Station, Texas. Meeting attendees reviewed the status of a purchasing plan utilizing a third-party funding source, engineering status, and roles and responsibilities for the engineering and proponent team. Co-Chief Scientists and the USIO project team worked on the *Scientific Prospectus* draft for submission to IODP Publication Services.

Operational Hiatus/Maintenance Period

Planning

Although implementation began with the Hobart, Australia, port call in March 2010, revisions to planned activities were required effectively through the end of execution. Task progress was tracked and discussed at weekly meetings at USIO-TAMU and implementation plans were modified as needed to deal with early completion, redevelopment according to changes in subproject outcomes, or some project or subproject deferral or rescoping resulting from new scheduling limitations. The Adelie Drift sampling and measurement party (an unprecedented shipboard effort) was scheduled for the last week of June concomitant with an external review of analytical systems and a visit by NSF representatives.

Shipboard Maintenance Activities

Projects funded within the Annual Program Plan were initiated during the transit from Hobart, Australia to Victoria, British Columbia, Canada. These projects continued after the crew change in May 2010, supplemented by additional staff and other resources according to the implementation schedule. General categories of projects undertaken include

- Engineering and operations (including pipe inspection and preventive maintenance and improvements to weight-on-bit monitoring and the Rig Instrumentation System),
- IT infrastructure (including upgrading workstations and instrument hosts where possible and upgrading servers, databases, and wireless services) (see **“Projects and other Activities”** in “Data Management” for more information),

- IT development (including improvements to Web services, upgrades to more than 100 applications and services, and upgrades and training on internet services) (see **"Projects and other Activities"** in "Data Management" for more information), and
- Lab infrastructure (including remodeling laboratories for improved core flow and service, repairing floors, organizing stores, reconfiguring analytical gas line, remodeling core description stations, redesigning and reconfiguring Section-Half Multisensor Logger to improve performance and reduce footprint, refinishing laboratory countertops, and rewiring analytical systems for additional safety, durability, and simpler maintenance).

USIO and Schlumberger personnel finalized several projects during the maintenance period in Victoria, British Columbia, including

- Wireline heave compensator (WHC) maintenance (including installing stainless piping and deck penetrations, draining/replacing filters, and filling the WHC with new hydraulic oil),
- Winch maintenance and quality checks (including flushing and filling with new hydraulic oil, replacing oil filters, and replacing drum sprocket on the existing drum),
- Offshore Modular HELP Cab (OMHC) maintenance (including checking surface acquisition equipment in the office and inside the OMHC logging cab, temporarily moving the OMHC winch cab to the dock, fabricating and installing a new steel frame to provide an elevation change for the cab, repositioning the OMHC cab on the new frame, replacing wiring, and performing final acceptance tests), and
- Wireline tool quality and maintenance checks (including shipping wireline tools to and from Schlumberger in Houston, Texas, via truck/flatbed).

Projects and Other Activities

Geosciences Laboratory (ODASES)

The IODP X-ray fluorescence (XRF) core scanner in the TAMU Ocean Drilling and Sustainable Earth Science (ODASES) Geosciences Laboratory attracted increasing numbers of analysis requests, including requests from Expedition 320/321: Pacific Equatorial Age Transect (PEAT) and Expedition 318: Wilkes Land Glacial History Science Party members. Most of the work performed focused on surveying core material for areas of interest. Upcoming requests include high spatial resolution analysis to attempt to identify key features (e.g., chromium, nickel, and iridium, looking for meteoric signal). USIO staff trained the visiting scientists on instrument use and oversaw operations; the USIO has no permanent shore-based technician funded to support the Geosciences Laboratory.

Large Diameter Pipe Handling Infrastructure

Howard and Associates, Inc. (HAI), finalized the request for quotations (RFQ) for the design and fabrication of the infrastructure for safely and efficiently handling large diameter (6-5/8 inch) pipe on board the *JOIDES Resolution.* Columbia University submitted the RFQ to vendors with an August 2010 deadline. USIO and HAI personnel will review responses and select a vendor in August 2010, and design and fabrication of the necessary infrastructure will commence in early FY11 once contracts with the vendor are finalized.

Magnetic Susceptibility Sonde Rebuild (MSS-B)

The USIO received funding to build two new magnetic susceptibility sonde (MSS)-B tools to replace the MSS-A that was lost at sea during Expedition 320: PEAT. Unlike the MSS-A tool,

the MSS-B tools will have the electronics section separate from the high-resolution sensor/housing and both the high- and low-resolution sensors will have the capability of using temperature readings for more accurate processing of the tool responses. Main tasks were scheduled for the next quarter, including completing the low- and high-resolution sensor housing; completing the power supply, communications, and electrical fast transient burst (EFTB) printed circuit board (PCB); fabricating the eccentralizer body; completing the high-resolution sensor; and fabricating the electronics housing. The bench testing phase for the low- and high-resolution sensors and temperature compensation is anticipated during the first quarter of FY11.

Multi-Function Telemetry Module (MFTM) Project

The multi-functional telemetry module (MFTM) and surface control panel that will be used for the motion decoupled hydraulic delivery system (MDHDS) project was successfully tested at the LDEO test well facility in combination with the University of Texas (Austin) penetrometer (temperature to pressure [T2P]). The MFTM was finalized and a final bench test with the entire MDHDS and T2P assembly is anticipated in late FY10 or early FY11.

LDEO received a subcontract from Stress Engineering to build an MFTM that will be used in Simple Cabled Instruments for Measuring Parameters In-situ (SCIMPI) deployment and submitted a proposal to the Center for Dark Energy Biosphere Investigations (C-DEBI) at the University of Southern California (USC) to build a third MFTM. The proposed MFTM will be used for deploying a combination of LDEO and Schlumberger tools with a deep exploration biosphere investigative tool (DEBI-t) that is being developed by scientists and engineers from USC, the National Aeronautic and Space Administration (NASA) Jet Propulsion Laboratory at the California Institute of Technology, and Photon Systems, Inc. The target for this deployment is DSDP Hole 395A during Expedition 336: Mid-Atlantic Ridge Microbiology in September 2011.

Multisensor Magnetometer Module (MMM)

The USIO received funds from IODP-MI to begin design and fabrication of the MMM. Initial steps included purchasing sensors for the tool, including a three-axis fluxgate magnetometer (Applied Physics Systems), Overhauser magnetometer (Marine Magnetics), three-axis optical rate sensor/gyroscope (InvenSense), and three-axis accelerometer (Dimension Engineering). Work began on acquiring nonmagnetic pressure housing. Main tasks were scheduled for completion during FY11 and FY12, including design and construction of power supply and microcontroller boards, large-scale design and tool construction, tool and bench testing, and test well deployment. The tool should be ready for the first expedition deployment in early FY13.

Wireline Heave Compensating System

WHC data collected during recent expeditions were analyzed, and an initial assessment of the system is good. The system reached a maximum 80% level of compensation in some instances. Recommendations for data collection and plans for future assessment under different conditions (i.e., water depth, heave, etc.) were distributed to USIO staff for implementation during future expeditions.

ENGINEERING DEVELOPMENT

There are no Engineering Development deliverables scheduled for FY10.

DATA MANAGEMENT

IODP Databases

LIMS Database

No new data were made available during the quarter.

Log Database

Expedition 313: New Jersey Shallow Shelf log data were received from European Consortium for Ocean Research Drilling (ECORD) Science Operator (ESO) and were loaded into the log database and then placed online with password protection since they are still under moratorium.

IODP Database Data Requests

LIMS Database

Visits by USIO-TAMU employees were filtered out.

Top 10 Countries Accessing LIMS Web Database		
Rank	**Country**	**Visitor Sessions**
1	United States	109
2	Japan	79
3	United Kingdom	25
4	Germany	14
5	Switzerland	10
6	France	6
7	Korea	6
8	Australia	3
9	Denmark	3
10	Italy	3
11	Norway	3
	Other	11
	Total	**272**

Top LIMS Web Queries		
Rank	**Query**	**Uploads**
1	LIMS–client	244
2	SCI–data	191
3	Samples	141
	Total	576

Janus Database

Visits by USIO-TAMU employees were filtered out.

Top 10 Countries Accessing Janus Web Database		
Rank	**Country**	**Visitor Sessions**
1	United States	1,063
2	Germany	527
3	United Kingdom	358
4	Japan	247
5	France	104
6	China	99
7	Australia	96
8	Western Europe	78
9	The Netherlands	63
10	Norway	56
	Other	385
	Total	**3,076**

Top 20 Janus Web Queries		
Rank	**Query**	**Uploads**
1	Sample	2,140
2	Imaging: photo	798
3	Requests	538
4	Site summaries	484
5	Hole trivia	449
6	Core summaries	435
7	Physical properties: gamma ray attenuation	351
8	Point calculations	331
9	Physical properties: magnetic susceptibility	270
10	Paleomagnetism: age model	269
11	Chemistry: carbonates	216
12	Physical properties: color data (RSC)	206
13	Physical properties: *P*-wave logger	193
14	Chemistry: interstitial water	176
15	Hole summaries (old)	172
16	Leg summaries	157
17	Hole summaries	155
18	Physical properties: moisture and density	140
19	Site summary trivia	124
20	Paleomagnetism: age profile	121
	Others	1,668
	Total	**9,393**

Other Web Statistics		
Database query hits:		
	Entire site (successful)	18,974
	Average per day	208
Visitor sessions:		
	Total number of visitor sessions	3,076
	Average per day	33
	Average length of visit (min)	12:33
	International visitor sessions	65.38%
	Visitor sessions of unknown origin	0.07%
	Visitor sessions from United States	34.56%
Visitors:		
	Unique visitors	1,719
	Visitors who only visited once	1,297
	Visitors who visited more than once	422
	Average visits per visitor	1.79

Data Requests to Data Librarian	
Requests	**Total**
Country:	
United States	9
United Kingdom	1
Australia	1
Belgium	1
Sweden	1
Total	**13**
Data:	
General	3
Color	2
Depth	2
Sample	1
Rock evaluation	1
Photo	1
Magnetic susceptibility	1
Moratorium	1
Other	1
Total	**13**

Log Database

Visits by USIO-LDEO employees were filtered out.

Top 10 Countries Accessing Log Web Database		
Rank	**Country**	**Visitor Sessions**
1	United States	453
2	China	108
3	United Kingdom	97
4	Japan	92
5	Germany	53
6	Australia	42
7	France	38
8	India	24
9	Norway	22
10	Brazil	18
	All others	191
	Total	**1,138**

Other Log Web Statistics		
Database query hits:		
	Entire site (successful)	7,742
	Average per day	6.75
Visitor sessions:		
	Total number of visitor sessions	1,138
	Average per day	12.51
	Average length of visit (min)	7:07
	International visitor sessions	43.42%
	Visitor sessions of unknown origin	16.78%
	Visitor sessions from United States	39.81%
Visitors:		
	Unique visitors	721
	Visitors who only visited once	616
	Visitors who visited more than once	522
	Average visits per visitor	2.22

Data Requests to Log Data Supervisor		
Expedition	**Request Number, Name, Affiliation, Country**	**Type of Data**
	There were no data requests for this period.	

Projects and Other Activities

Computer System Upgrades on the *JOIDES Resolution*

The USIO continued work on high-priority projects to enhance information technology (IT) infrastructure and science system services on board the *JOIDES Resolution*. Projects included

- LIMS reports: a new application that rapidly provides specific data reports from the Laboratory Information Management System (LIMS) via the Web. This is not a replacement for Web Tabular Report, but an additional capability that provides more consistent, user-friendly report functionality.
- LIMSpeak: a new application that provides rapid graphic Web viewing of LIMS information in a barrel-sheet style.
- Superconducting rock magnetometer (SRM) analysis rebuild: revising the structure and content of information captured to reduce the parsed data footprint, with the effect of reducing overall data size by more than 30 percent.
- Windows instrument host workstation operating systems upgrade to Windows 7, where feasible.
- Tomcat application server software upgrade on Solaris clusters to match what is in use on Linux platforms.
- Upgrade of 80 Macintosh and Windows non-instrument host workstation operating systems to Snow Leopard or Windows 7 and appropriate office-productivity software.
- Cumulus Digital Asset Management System upgrade to Version 8.
- EVA4000 Storage Area Network (SAN) firmware and control software upgrade.
- Enterasys NAC system upgrade to Version 3.2 and configuration.
- CommVault backup software upgrade to Version 8.
- LIMS2Excel upgrade to improve functionality of the application through implementing user-defined modifications.

Computer System Upgrades for the Borehole Research Group

A Network Attached Storage (NAS) unit was configured and installed in the LDEO Geoscience Server room as part of an effort to ensure business continuity. The NAS unit will provide out-of-building backup of all home directories, wiki, subversion repository, and the LDEO listserver. Preparations began for creating an off-site copy of these data on another NAS at Ocean Leadership.

CORE CURATION

Sample Requests

All core sample requests were handled by the Bremen Core Repository (BCR), GCR, and Kochi Core Center (KCC). Sample requests handled by the GCR are reported in this table.

IODP Expedition/ Repository	Visitors	Request Number, Name, Country	Number of Samples
Gulf Coast Repository:			
		21921B, Jung, Germany	397
		22047A, Alloway, New Zealand	243
		22041A, Herbert, USA	570
		21640C, Paytan, USA	22
	1	21894B, Marcantonio, USA	0
		21894A, Xie, USA	10
		22045A, Huesser, USA	33
		22064A, Orcutt, Denmark	15
		22007A, Wortmann, Canada	49
		22055A, Orcutt, Denmark	5
	5	22059B, Ravelo, USA	5
		22059A, Ravelo, USA	741
		22058A, LaRiviere, USA	401
		21951A, Dyck, USA	710
		22021B, Schneider Mor, USA	59
		22070A, Vasilyeva, USA	2
		22053A, Kimura, Japan	5
		22065A, Hong, USA	13
		22066A, Hong, USA	33
		21976A, Quintana Krupinski, USA	69
		22052A, Barnes, USA	31
		21746A, Garrido, Spain	21
		540IODP, John, United Kingdom	609
		22010A, Dowsett, USA	104
		22057A, Scudder, USA	134
		22018A, Mogollon, Colombia	104
		21086E, Norris, USA	24
		22069A, Pierce, USA	35
		22062A, Wayman, USA	50
		22061A, Mueller, USA	18
		22071A, Quintana Krupinski, USA	155
		22083A, Chang, United Kingdom	10
		22045B, Heusser, USA	12
		21896A, Hemming, USA	550
		21445B, Martin, USA	176
		22089A, Oskina, Russia	45
		21767B, O'Connell, USA	83
		22037A, Hughen, USA	3,213
		20725F, Badger, United Kingdom	70
		22097A, St John, USA	2
		22045C, Huesser, USA	34
		22011B, Pagani, USA	36
		22103B, Paytan, USA	451
		22103A, Paytan, USA	576
		21149B, Ford, USA	63
		22111A, Koppers, USA	11
		597IODP, Dinares-Turell, Italy	51
	1	22110A, Geldmacher, USA	14
	1	762IODP, Jackett, USA	127
	1	Public Relations Tours (1)	No samples

IODP Expedition/ Repository	Visitors	Request Number, Name, Country	Number of Samples
Expedition 318:			
	26	Wilkes Land Glacial History Sampling Party	**11,375**
	16	Adelie Drift (APL 638) Sampling Party	**11,416**
Total science	**50**	**50**	**32,982**
Total education:	**0**	**0**	**0**
Total public relations:	**1**	**0**	**0**
Total:	**51**	**50**	**32,982**

Projects and Other Activities

Expedition 318 Sampling Party

The USIO hosted the Expedition 318: Wilkes Land Glacial History postexpedition sampling party from 21 to 26 June 2010 at the GCR in College Station, Texas, assisting Expedition 318 Science Party members in collecting 11,375 samples.

Adelie Drift Sampling Party

In an unprecedented shipboard effort, the USIO hosted a special sampling and measurement party held 27 June–2 July 2010 on the *JOIDES Resolution* in Victoria, British Columbia, to sample cores from Ancillary Project Letter (APL) 638: Adelie Drift that were collected during Expedition 318: Wilkes Land Glacial History. USIO staff assisted scientists in collecting 11,416 samples.

PUBLICATIONS

USIO Reports

FY10 Q2 IODP-USIO Quarterly Report

The USIO report for the second quarter of FY10 (January–March 2010) was submitted to NSF and the IODP central management office (IODP Management International, Inc. [IODP-MI]) on 14 May 2010. (http://iodp.tamu.edu/publications/AR/FY10/FY10_Q2.pdf)

FY11 IODP-USIO Annual Program Plan to IODP-MI

On 14 April 2010, the USIO submitted for review and evaluation the IODP-USIO FY11 Annual Program Plan to IODP-MI, which outlines requests for SOC and POC costs including the South Pacific Gyre Expedition, Louisville Seamount Trail Expedition, Costa Rica Seismogenesis Project Expedition, Superfast Spreading Rate Crust 4 Expedition, a 123-day maintenance period, and the Mid-Atlantic Ridge Microbiology Expedition; long–lead time planning costs for expeditions proposed for FY12; and continuing SOC shore-based activities during FY11. The IODP-USIO FY11 Annual Program Plan to IODP-MI budget totals $66,629,928, with $4,081,893 in SOC requested from IODP-MI and $62,548,034 requested from NSF to support platform operating costs.

FY11 IODP-USIO Annual Program Plan to NSF

On 16 April 2009, the USIO submitted for review and evaluation the IODP-USIO FY11 Annual Program Plan to NSF, which combines costs that were identified in previous fiscal years as SOC Operations, POC, and SIC into a single budget containing all NSF-funded costs in a category newly defined as IODP-USIO U.S. Systems Integration Contract costs (SIC) (see **"Appendix A: Finance Report"** for more information).

The IODP-USIO FY11 Annual Program Plan to NSF outlines requests for costs including the South Pacific Gyre Expedition, Louisville Seamount Trail Expedition, CRISP Expedition, Superfast Spreading Rate Crust 4 Expedition, a 123-day maintenance period, and the Mid-Atlantic Ridge Microbiology Expedition; long–lead time planning costs for expeditions proposed for FY12; and USIO efforts for education and outreach and associated management and administrative support. The IODP-USIO FY11 Annual Program Plan to NSF budget totals $63,598,421.

The IODP-USIO FY11 Annual Program Plan to NSF also includes Appendix I: USIO IT Security Summary, Appendix II: Recommended IODP-USIO Program of Insurance, and Appendix III: USIO Science Operating Costs by Institution.

IODP Scientific Publications

Publication	Release Date	Digital Object Identifier	Comments
Scientific Prospectus:			
Expedition 330 (Louisville Seamount Trail: implications for geodynamic mantle flow models and the geochemical evolution of primary hotspots)	21 April 2010	doi:10.2204/iodp.sp.330.2010	
Expedition 329 (South Pacific Gyre Microbiology)	28 April 2010	doi:10.2204/iodp.sp.329.2010	
Preliminary Reports:			
Expedition 318 (Wilkes Land glacial history: Cenozoic East Antarctic ice sheet evolution from Wilkes Land margin sediments)	26 April 2010	doi:10.2204/iodp.pr.318.2010	
Proceedings of the Integrated Ocean Drilling Program:			
Volume 303/306			
Data report: calcareous nannofossil assemblages at IODP Expedition 303 Site U1308 during the last 550,000 years	28 May 2010	doi:10.2204/iodp.proc.303306.211.2010	
Data report: Pleistocene paleomagnetic and rock magnetic records from IODP Site U1312 on the southern flank of the King's Trough	16 April 2010	doi:10.2204/iodp.proc.303306.208.2010	
Expedition 303/306 synthesis: North Atlantic climate	30 June 2010	doi:10.2204/iodp.proc.303306.214.2010	

IODP Scientific Publication Deadline Extension Requests

The requirement of all Science Party members to conduct research and publish the results of their work is detailed in the IODP Sample, Data, and Obligations Policy (http://www.iodp.org/program-policies/). To fulfill this obligation, scientists must have their papers published in a peer-reviewed scientific journal or book that publishes in English, or as a peer-reviewed data report in the *Proceedings of the Integrated Ocean Drilling Program.* Manuscripts must be submitted within 20 months postmoratorium (26 months for synthesis papers). Science Party members may request a deadline extension of up to one year. The Platform Curator reviews and approves these extension requests, and IODP Publication Services monitors fulfillment of the publishing obligation. The tables below show extensions requested

during the quarter and the status of all deadline extensions approved during the life of each volume.

Initial papers/data reports

Expedition	Submission Deadline (20 Months Postmoratorium)	Deadline Extensions Approved in FY10 Q3	Overall Extension Status	
			Number Approved	Number Fulfilled
301	20 April 2007			
302	23 July 2007			
304/305	4 February 2008		14	12
308	7 March 2008		8	7
303/306	9 May 2008		13	8
307	13 June 2008		4	3
311	27 June 2008		12	8
309/312	28 August 2008		9	9
310	4 November 2008		16	7

Synthesis papers

Expedition	Submission Deadline (26 Months Postmoratorium)	Deadline Extensions Approved in FY10 Q3	Overall Extension Status	
			Number Approved	Number Fulfilled
301	22 October 2007		1	1
302	21 January 2008		1	1
304/305	4 August 2008		1	1
308	8 September 2008		1	1
303/306	10 November 2008		1	1
307	15 December 2008		1*	1
311	29 December 2008		1	1
309/312	27 February 2009		1*	
310	4 May 2009		1*	

*Requests for submission deadline extensions beyond 38 months postmoratorium were received and referred to the respective Platform Curator.

Scientific Publication Distribution

Publication	Number Distributed
IODP Publications:	
Proceedings of the Integrated Ocean Drilling Program Expedition Report DVDs	21
ODP Publications:	
Proceedings of the Ocean Drilling Program, Initial Reports	1
Proceedings of the Ocean Drilling Program, Scientific Results	1

IODP Digital Object Identifiers

IODP is a member of CrossRef, the official digital object identifier (DOI) registration agency for scholarly and professional publications. All IODP scientific reports and publications are

registered with CrossRef and assigned a unique DOI that facilitates online access. DOIs have also been assigned to ODP and DSDP scientific reports and publications. CrossRef tracks the number of times a publication is accessed, or resolved, through the DOI system. Statistics for the reporting quarter are shown in the table below.

Reports and Publications	DOI Prefix	Number of Resolutions			
		April 2010	May 2010	June 2010	FY10 Q3 Total
IODP	10.2204	2,722	1,680	2,021	6,423
ODP/DSDP	10.2973	4,410	4,321	3,325	12,056

Projects and Other Activities

External Review

IODP Publication Services hosted an external review on 15 and 16 April 2010 during which three reviewers participated in a site visit and intensive review of the department. The review team members have broad professional and academic experience with government, technical, and scholarly publications and communications and experience with ocean drilling science and the committees that advise, manage, and review IODP and other ocean sciences programs.

The review team was asked to consider the questions of whether the department could improve the efficiency of its work flows, the department makes adequate use of technology, and the department's infrastructure (human, physical, and financial) are sufficient to achieve its mission and goals. A report of the review team's findings was delivered to the USIO during the quarter.

EDUCATION

U.S. education activities are supported by NSF through other Program integration costs (OPIC).

Deep Earth Academy

Deep Earth Academy Web Site

Deep Earth Academy completed a review of its Web site (deepearthacademy.org) and improved the presentation of its activity database, updated a number of older activities, streamlined content, and simplified access to many resources.

JOIDES Resolution Web Portal and Social Networking

The joidesresolution.org Web site went through a lower usage period during this quarter because the ship was in a transit and maintenance period in lieu of expedition operations. However, the site did feature blogs from staff, educators preparing for Expedition 327: Juan de Fuca Hydrogeology, and several other guest bloggers. The site also featured the winners of the J/aRt contest (http://joidesresolution.org/node/1120). Deep Earth Academy staff also used this time to review, streamline, and improve a number of pages on the site.

The *JOIDES Resolution* Facebook fan base grew to more than 1,700, and *JOIDES Resolution* Twitter followers increased to 273.

Educational Materials Distribution

Deep Earth Academy distributed materials at conferences and outreach activities and in response to requests received through the Deep Earth Academy Web site. During this quarter, Deep Earth Academy distributed 338 posters, 734 bookmarks, 800 pencils, and 100 DVDs. Materials were distributed at the following meetings.

Conference/Meeting/Workshop	Date	Location
TeXas Earth and Space Science (TXESS) Revolution Training	June 2010	Austin, Texas
California Science Teachers Association (CSTA) Meeting: Using Real Oceanographic Polar and Climatic Data in the Science Classroom	June 2010	Sacramento, California
CSTA Teacher Professional Development Seminar	June 2010	Sacramento, California
Centers for Ocean Science Education Excellence (COSEE) SouthEast Ocean Sciences Education Leadership Institute	23 June–1 July 2010	Charleston, South Carolina

Materials Development and Education Programs

Materials Development

Deep Earth Academy developed a new version of the DVD that includes all of the videos from Expedition 320/321: PEAT and Expedition 318: Wilkes Land Glacial History.

Videoconferencing

Deep Earth Academy used the *JOIDES Resolution*'s transit and maintenance period this quarter to refine protocols for videoconferencing, develop a videoconferencing request form to post online, and set up a preliminary videoconference schedule for the Expedition 327: Juan de Fuca Hydrogeology.

In addition, staff conducted a videoconference from the *JOIDES Resolution* in the Victoria, British Columbia, port to Ocean Leadership for a teachers' professional development workshop as part of the Smithsonian's National Science Resource Center Earth's History and Global Change Academy. Participants interacted with technicians, Staff Scientists, and Expedition 318: Wilkes Land Glacial History Science Party members who were on board the ship for the Adelie Drift sampling party.

Educational Outreach

School of Rock 2010

Preparations continued for School of Rock 2010, which will take place from 9 to 19 September 2010 on board the *JOIDES Resolution* during Expedition 328: Cascadia ACORK, departing from and returning to Victoria, British Columbia. This year's workshop will feature a team of five educators and eighteen participants—a mix of invited strategic partners, informal science educators, and classroom teachers (see **"Strategic Partnerships"** for more information).

Onboard Educator Program

Deep Earth Academy finalized staffing for Expedition 327: Juan de Fuca Hydrogeology, during which an unprecedented team of six education/outreach personnel will sail. The final team selections include one classroom teacher from Ohio (J. Kane), two classroom teachers from France (J. M. Gautier and B. Thiberge) selected by the ECORD Science Advisory Committee (ESSAC), a scientific illustrator from Texas (D. Bowman), a TAMU computer animation graduate student (S. Keske), and a Historically Black Colleges and Universities (HBCU) Fellow from Virginia State University (B. Richardson) (see **"Diversity Support Activities"** for more information).

In preparation for the expedition, Deep Earth Academy worked with Co-Chief Scientist A. Fisher and other staff to present a number of webinars and conference calls for the team. Topics included an introduction to IODP/the *JOIDES Resolution*, introduction to the expedition's goals, outreach brainstorming, how to create a podcast, and how to contribute to the *Tales of the*

Resolution project. The expedition was scheduled to set sail 9 July 2010 from Victoria, British Columbia.

Deep Earth Academy staff selected Education Officers for Expedition 329: South Pacific Gyre Microbiology and Expedition 336: Mid-Atlantic Ridge Microbiology and began logistical preparations for their work.

Educational Outreach Events

Event*	Target Audience	Date	Location
J-aRt winner event: scientist presentation/activities session at a high school	High school students	3 June 2010	Glen Burnie, Maryland
J-aRt winner event: museum event and next-day school event	Elementary and middle school students	8 and 9 June 2010	Lancaster, Pennsylvania
J-aRt winner event: museum and community events	Informal science	1–3 July 2010	Utica, New York
National Science Resources Center (NSRC) Earth Science Academy	Teachers	30 June 2010	Washington, DC

*Teacher workshops, lectures, presentations, or meetings that were conducted by representatives of the Deep Earth Academy or at which representatives of Deep Earth Academy gave presentations.

Deep Earth Academy staff began planning for a booth at the USA Science and Engineering Festival Expo on the National Mall, which will take place 23 and 24 October 2010. Plans for this event include activities and displays at the booth, a possible video broadcast at a venue near the mall, and handouts to the public.

Diversity Support Activities

Historically Black Colleges and Universities Programs

HBCU Fellowship

B. Richardson, a Virginia State University undergraduate engineering student, was selected in May 2010 as the Summer 2010 HBCU Fellow. Richardson's fellowship will consist of sailing on board the *JOIDES Resolution* during Expedition 327: Juan de Fuca Hydrogeology from 5 July to 5 September 2010 and working with the education/science communication team and alongside scientists and engineers from the IODP member nations. Richardson will help develop and implement innovative methods and products to bring scientific ocean drilling to students and teachers and promote careers in Earth Systems Sciences (or complementary fields) to underrepresented minorities (particularly at HBCUs and other minority-serving institutions) and to the general public. Her fellowship will also include shadowing shipboard engineering staff to learn more about their career paths, daily responsibilities, and data processing techniques. After the expedition, Richardson will present at several venues her experiences as the first HBCU Fellow to join an IODP expedition as part of the fellowship.

Strategic Partnerships

Deep Earth Academy staff worked closely with C-DEBI organizing team to coordinate education and outreach programs related to the three upcoming microbiology-focused expeditions—Juan de Fuca Hydrogeology, South Pacific Gyre Microbiology, and Mid-Atlantic Ridge Microbiology.

Deep Earth Academy continued to work with the Maryland Science Center to plan future programs, including several ship-to-shore videoconferences to be held in early FY11, as well as other potential programs.

A number of strategic partners are sending representatives to participate in the School of Rock 2010, including the American Meteorological Society (AMS); Paleontologic Research Institution (PRI) in Ithaca, New York; Denver Museum of Nature and Science; NASA; Aquarium of the Pacific; Institute for the Application of Geospatial Technology (IAGT) at Cayuga Community College in Auburn, New York; and KQED radio station in San Francisco, California. All of these organizations are current or potential partners for upcoming projects and grant proposals.

Outside Funding and Sponsorships

Deep Earth Academy worked with the American Meteorological Society to submit a program proposal in response to NSF Climate Change Education Partnership Program, Phase I (CCEP-I) program solicitation 10-542. The proposal included IODP data about past climate and a large number of potential partners with academic and informal science institutions. This program is on a fast track for evaluation and news about funding should be received during the next quarter.

Staff also received word that neither the NSF Innovative Technology Experiences for Students and Teachers (ITEST) proposal that was submitted in partnership with the National Ocean Sciences Bowl (NOSB) nor the Centers for Ocean Science Education Excellence (COSEE) proposal that was submitted in partnership with Antarctic Geological Drilling (ANDRILL) were funded. The USIO is looking into ways to revise the ITEST proposal for resubmission.

OUTREACH

Communications Outreach Activities

USIO communications and outreach activities this quarter focused on opportunities to publicize scientific ocean drilling through related publications and events with the goal of raising public and media awareness.

Highlights include the following events:

- IODP research and education was featured at a booth at the 16th Annual Coalition for National Science Funding Exhibition and Reception held 16 April 2010 on Capitol Hill. USIO staff from Ocean Leadership manned the booth, which included video footage from Expedition 318: Wilkes Land Glacial History and a model core for visitors to learn more about IODP science.
- Three IODP scientists and one School of Rock alumnus participated in the Science, Engineering and Technology Congressional Visits Day held 28 and 29 April 2010. Participants attended training and information sessions at the American Geophysical Union and American Association for the Advancement of Science headquarters and spent one day meeting with congressional staff and representatives on Capitol Hill.
- At NSF's request, the USIO developed a new brochure entitled "*Exploring the Earth Using Scientific Drilling: 2009–2010 Expeditions onboard the* JOIDES Resolution," which was distributed to NSF and used in promotional material packets for a variety of outreach activities.

- The USIO conducted significant media coverage of Expedition 324: Shatsky Rise Formation, including a press release that was picked up by multiple news outlets across the United States and internationally. This coverage was bolstered by the eruption of Iceland's Eyjafjallajokull volcano in May 2010, and coverage has continued past this quarter (through July 2010), which is a longer-than-average run for a story.
- IODP education programs were the highlight of an IODP booth at the 2010 NSF Joint Annual Meeting held 6–9 June 2010 in Washington, DC. USIO staff were available to answer questions about IODP K–12 and undergraduate education and diversity initiatives. USIO staff prepared handouts to advertise the HBCU Fellowships and upcoming opportunities for HBCU Educators at Sea.

Public Relations Materials

During this quarter, the Communications Team either developed and published or played a role in developing the following press releases and media advisories:

- Deciphering the mysteries of an ancient seafloor goliath (9 April 2010).
- Through the looking glass: scientists peer into Antarctica's past to see our future climate (29 April 2010).
- Deep sea researchers to visit North Museum June 8 (2 June 2010).

Program-related Publications

Articles Authored by USIO Staff

Science and other articles authored by USIO staff published during this quarter include the following. Bold type indicates USIO staff. Other Program-related science articles are available online through the ocean drilling citation database (iodp.tamu.edu/publications/citations/database.html) and the IODP Expedition-related bibliography (iodp.tamu.edu/publications/citations.html).

- **Williams, T.,** van de Flierdt, T., Hemming, S.R., Chung, E., Roy, M., and Goldstein, S.L., 2010. Evidence for iceberg armadas from East Antarctica in the Southern Ocean during the late Miocene and early Pliocene. *Earth Planet. Sci. Lett.*, 290(3–4):351–361. doi:10.1016/j.epsl.2009.12.031

News Articles, Programs, Media Citations, or Public Commentary

Examples of news articles, programs, media citations, or public commentary related to IODP expeditions published this quarter included the following. See the "IODP in the news" Web page (www.iodp-usio.org/Newsroom/news.html) for other articles that raise the profile of the Program.

- *Albuquerque Express*, 2010. Antarctica was once a warm "greenhouse" world. *AlbuquerqueExpress.com*, 30 April 2010. http://story.albuquerqueexpress.com/index.php/ct/9/cid/89d96798a39564bd/id/629347/cs/1/
- *Albuquerque Express*, 2010. Boffins explore origins of "supervolcanoes." *AlbuquerqueExpress.com*, 10 April 2010. http://story.albuquerqueexpress.com/index.php/ct/9/cid/89d96798a39564bd/id/622082/cs/1/

- Boyd, R.S., 2010. Drilling for data: half of life may be below land, sea. *Richmond Times-Dispatch*, 10 April 2010. http://www2.timesdispatch.com/lifestyles/2010/apr/10/i-life0309_20100408-224407-ar-163493/
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- Hill, J.S., 2010. Antarctica's past revealing Earth's future. *Planetsave.com,* 3 May 2010. http://planetsave.com/blog/blog/2010/05/03/antarctica%E2%80%99s-past-revealing-earth%E2%80%99s-future/
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- *Lab Spaces,* 2010. Scientists peer into Antarctica's past to see our future climate. *Labspaces.net,* 29 April 2010. http://www.labspaces.net/103444/Scientists_peer_into_Antarctica_s_past_to_see_our_future_climate
- National Science Foundation, 2010. Scientists explore origins of 'supervolcanoes' on the sea floor: ancient goliaths blamed for multiple mass extinctions. *NSF News*, Press Release 10-057. http://www.nsf.gov/news/news_summ.jsp?cntn_id=116706&WT.mc_id=USNSF_51&WT.mc_ev=click
- Persichette, C., 2010. Montclair University professor joins Antarctic expedition. *my9news.com*, 6 May 2010. http://www.my9tv.com/dpp/my9_news/going_green/Antarctica-Expedition
- *Scientific Computing,* 2010. Peering into Antarctica's past: sediment cores tell tales of early climates. *Sci. Comp.,* 3 May 2010. http://www.scimag.com/news-DS-Peering-into-Antarcticas-Past-Sediment-cores-tell-tales-of-early-climates-050310.aspx
- *Sea Technology Magazine,* 2010. Drilling project finding clues to oceanic supervolcano origins. *Sea Technol. Mag.*, May 2010. http://www.sea-technology.com/news/archives/2010/ocean_research/ocean_research0510.html
- Swanson, P., 2010. Western student digs Antarctica—literally: scientific research trip gathers samples from sea floor never before tested. *Kalamazoo Gazette*, 3 April 2010. http://www.mlive.com/living/kalamazoo/index.ssf/2010/04/western_student_digs_antarctic.html
- Texas A&M University, 2010. School of Rock gives teachers hands-on science research experience. *TAMU College of Education and Human Development News*, 7 April 2010. http://www.cehd.tamu.edu/articles/school_of_rock

- *Thaindian News*, 2010. Data could help unlock mystery of undersea supervolcanoes. *Thaindian.com*, 12 April 2010. http://www.thaindian.com/newsportal/sci-tech/data-could-help-unlock-mystery-of-undersea-supervolcanoes_100346630.html
- *Underwater Times*, 2010. Researchers: ancient supervolcano created giant underwater mountain chain. *UnderwaterTimes.com*, 9 April 2010. http://www.underwatertimes.com/news.php?article_id=82397510641

USIO INTERACTIONS WITH IODP-MI, ESO, AND CDEX

Interactions

Publications Staff Exchange between the USIO and CDEX

A Marine Works Japan technician who works on the *Chikyu* completed onsite training with TAMU Publication Services in College Station, Texas, to learn about IODP seagoing and shore-based publications duties. The training period, which began in October 2009 and was scheduled for a minimum of six months, was extended through May 2010 to enable the visiting technician to learn about publications duties associated with IODP postexpedition meetings.

IODP-CDEX Expedition 322 Postexpedition Meeting

The USIO provided meeting facilities and publications support for the IODP-CDEX Expedition 322 first postexpedition meeting on 26–30 April 2010 in College Station, Texas.

IODP-ESO Expedition 313 Postexpedition Meeting

The USIO provided meeting facilities and publications support for the IODP-ESO Expedition 313 first postexpedition meeting held 4–7 June 2010. The meeting was held in College Station, Texas, to allow access to the Publication Services staff, which is responsible for formatting and editing scientific reports and publications from all IODP implementing organizations (IOs).

Technical and Analytical Input to IODP-MI

The USIO provided IODP-MI with input regarding historic and current technical and analytical facilities innovations.

Meetings

IODP working group, task force, and other special meetings are described in this section. Standard Science Advisory Structure (SAS) committee and panel meetings are listed in **Appendix B: Conference and Meeting Schedule.** USIO attendees to all meetings are listed in **Appendix C: Travel.**

IODP-MI Operations Task Force

An IODP-MI Operations Task Force (OTF) Meeting was held 27 and 27 April 2010 in Tokyo, Japan (see **"Appendix C: Travel"** for list of USIO attendees). USIO representatives participated in developing IODP expedition schedule options for FY12 and FY13. Discussions included potential modification of the FY11 schedule. Plans were made to present a draft FY12 USIO expedition schedule to the Science Planning Committee (SPC) in August 2010.

International Working Group Plus

An International Working Group Plus (IWG+) Meeting was held 16–18 June 2010 in Kyoto, Japan (see **"Appendix C: Travel"** for list of USIO attendees). USIO representatives participated in discussions regarding membership categories and levels for the next scientific ocean drilling program. Consensus was reached to have three major membership categories: Lead Agency (LA), Platform Provider (PP), and Member. It was also decided that the new Program will be managed by a Program Governing Board (PGB). The PGB will be the advisory body of the new program management structure and will be responsible for the effective delivery of the Program's Implementation Plan with the available resources. The PGB will comprise representatives from the LA, PP, and Member categories and Chairs of the two major science committees, the Implementing Organizations (IO), and the CMO (secretariat).

Meeting participants discussed the SAS Structure and Transition Plan and agreed that the new Program architecture will be considerably simpler than the one in place for IODP. The current three-tier system of Science, Steering, and Evaluation Panel (SSEP); SPC; and SASEC will be simplified into a two-tier system (Evaluation and Implementation).

APPENDIX A: FINANCE REPORT

Finance Report Format

The first quarter of FY10 marked a change in how the USIO quarterly report's **Appendix A: Finance Report** is organized.

From FY04 through FY09, the USIO Annual Program Plan budget request was partitioned into categories determined by a complex set of cost definitions. Over the years, these definitions have been adjusted and finally simplified to the current structure. The FY10 quarterly report **Appendix A: Finance Report** correlates to the FY10 Annual Program Plans to NSF and IODP-MI in a structure that dramatically reduces the number of pages in the appendix. To accommodate this correlation, the prior years' costs in the finance report appendix have been combined as noted in the table below.

FY10 Definition	Prior Years' Definitions
Science Operating Costs (SOC)	SOC, SOC nonoperations
Platform Operating Costs (POC)	POC, SOC operations
Other Program Integration Costs (OPIC)	U.S. Systems Integration Contract costs (SIC) demobilization, SIC nondemobilization
Systems Integration Contract (SIC) costs	POC, SOC Operations, SIC demobilization, SIC nondemobilization

Adjustments were also made within and between work breakdown elements (WBEs). Prior years' costs from the defunct Education and Outreach WBE have been merged with the Education WBE, and prior years' costs from the DSDP/ODP Core Redistribution Project have been rolled up into the Core Curation WBE. In addition, the line-item FY08 budget adjustments reported in the FY09 Q4 report have been rolled up into the Salaries and Wages line item within their relative WBEs.

Beginning with the FY10 Q1 report, the finance report appendix provided to NSF includes SIC costs as defined above and the finance report appendix provided to IODP-MI includes SOC and POC costs as defined above.

Please contact info@oceanleadership.org for hard copies of financial pages.

APPENDIX B: CONFERENCE AND MEETING SCHEDULE

Conference/Meeting*	Date	Location
IODP-MI Operations Task Force (OTF) Meeting	26 and 27 April 2010	Tokyo, Japan
2010 Offshore Technology Conference (OTC)	3–6 May 2010	Houston, Texas
Environmental Protection and Safety Panel (EPSP) Meeting	14 May 2010	Yokohama, Japan
Science Steering and Evaluation Panel (SSEP) Meeting	18–20 May 2010	Kochi, Japan
International Conference: The Colors of Cretaceous and Paleogene Oceans	16–19 May 2010	Verbania, Lake Maggiore, Italy
Science Advisory Structure Executive Committee (SASEC) Meeting	14 and 15 June 2010	Kyoto, Japan
International Working Group Plus (IWG+) Meeting	16–18 June 2010	Kyoto, Japan

*Implementing organization meetings, IODP-MI task force meetings, Science Advisory Structure (SAS) panel meetings, Program-sponsored conferences, and scientific and educational conferences at which the USIO had a booth or exhibit.

APPENDIX C: TRAVEL

Purpose*	Dates	Location	Institution: Personnel
Annual Program Plan and Quarterly Report Meetings and cross training	7–24 April 2010	College Station, Texas	TAMU: G. Lowe
Relocation	11–25 April 2010	College Station, Texas	TAMU: S. J. Jackett
Panalpina Compliance Class	13 April 2010	Houston, Texas	TAMU: S. Dillard
Scheduled ship support, upgrades/improvements, and training during maintenance period: first crew	13 April–7 May 2010	Victoria, British Columbia, Canada	LDEO: D. Quoidbach TAMU: T. Cobine, D. Fackler, P. Gates, M. Hodge, B. Julson, R. Mitchell, E. Moortgat, A. Trefethen
Publication Department External Reviews	14–17 April 2010	College Station, Texas	Review Team: R. Murray
Implementing Process Change Seminar	19–21 April 2010	Austin, Texas	TAMU: A. Crane
Contractors Purchasing Systems Review Seminar	19–21 April 2010	Washington, DC	TAMRF: M. Strickland
Digital Video Training	25–29 April 2010	Addison, Texas	TAMU: B. Crawford
Operations Task Force (OTF) Meeting	26 and 27 April 2010	Tokyo, Japan	Ocean Leadership: D. Divins LDEO: M. Reagan TAMU: M. Malone
USIO Engineering Meeting with Ocean Drilling Limited (ODL)	28 and 29 April 2010	College Station, Texas	Ocean Leadership: G. Myers
USIO Alliance Meeting	3 May 2010	Washington, DC	TAMU: B. Clement
2010 Offshore Technology Conference (OTC)	3–6 May 2010	Houston, Texas	TAMU: B. Aduddell, L. Cheng, K. Grigar, M. Meiring, S. Midgley
NSF Large Facilities Workshop	3–7 May 2010	San Diego, California	TAMU: M. Malone

Purpose*	Dates	Location	Institution: Personnel
Testing logging equipment at Schlumberger	3–9 May 2010	Houston, Texas	LDEO: S. Mrozewski
Analytical and Quantitative Light Microscopy Training	4–16 May 2010	Woods Hole, Massachusetts	TAMU: Z. Mateo
Professional Development Class: Knowledge and Ideas	5–8 May 2010	Oklahoma City, Oklahoma	TAMU: B. Wasson
Very Small Aperture Terminal (VSAT) Training	5 May–11 June 2010	Concord, California	TAMU: A. Trefethen
Scheduled ship support, upgrades/improvements, and training during maintenance period: second crew	7 May–4 July 2010	Victoria, British Columbia, Canada	LDEO: T. Baker, G. Sarker TAMU: T. Blaisdell, E. Claassen, B. Clement, R. Davis, C. Flores, P. Foster, P. Gates, R. Grout, G. Gustafson, D. Hornbacher, D. Houpt, J. Kotze, M. Meiring, J. Miller, R. Mitchell, J. Rosser, J. Smidt, M. Vasilyev, J. Zhao
SeaTel Satellite System Training	8–15 May 2010	San Francisco, California	TAMU: J. Cordray
LabVIEW Training	10–14 May 2010	Houston, Texas	TAMU: A. Morgan
Travel Regulation Training	10–14 May 2010	Seattle, Washington	TAMRF: I. Kindt
Council of Science Editors (CSE) Conference	14–18 May 2010	Atlanta, Georgia	TAMU: E. O'Roke
Expedition 324 Postexpedition Meeting	16–21 May 2010	College Station, Texas	LDEO: G. Iturrino
International Conference: The Colors of Cretaceous and Paleogene Oceans	16–19 May 2010	Verbania, Italy	LDEO: A. Malinverno
Meeting with Ocean Drilling Limited (ODL) accountant	17–19 May 2010	Houston, Texas	TAMRF: I. Kindt
USIO Alliance Meeting	18 and 19 May 2010	Washington, DC	LDEO: D. Goldberg
Science Steering and Evaluation Panel (SSEP) Meeting	18–20 May 2010	Kochi, Japan	LDEO: G. Guerin, A. Slagle TAMU: C. Alvarez Zarikian
CRISP Pre-expedition Meeting	19–22 May 2010	College Station, Texas	LDEO: A. Malinverno
Managing Projects Training	24–26 May 2010	Austin, Texas	TAMU: A. Crane
Cascadia FY12 Expedition Planning Meeting	1–4 June 2010	Tokyo, Japan	TAMU: M. Malone
Mohole Workshop 2010	3–5 June 2010	Kanazawa, Japan	Ocean Leadership: G. Myers
Texas Higher Education Human Resources Association 2010 Summer Conference	6–8 June 2010	Fredericksburg, Texas	TAMU: K. Johnson
American Society of Limnology and Oceanography (ASLO) Summer Conference	6–11 June 2010	Santa Fe, New Mexico	Ocean Leadership: M. Morell

Purpose*	Dates	Location	Institution: Personnel
JOIDES Resolution Art (J/aRT) Prize Event	8 June 2010	Lancaster, Pennsylvania	Ocean Leadership: S. Cooper, J. Collins J/aRT Committee: S. Hovan, K. St. John
Petrobras Meeting	11–19 June 2010	Houston, Texas	TAMU: B. Clement
Science Advisory Structure Executive Committee (SASEC) Meeting	14 and 15 June 2010	Kyoto, Japan	Ocean Leadership: D. Divins TAMU: B. Clement
Agilent Seminar	15 June 2010	Houston, Texas	TAMU: Y. Vasilyeva
USIO Engineering Meeting with Transocean	15–16 June 2010	Vancouver, British Columbia, Canada	Ocean Leadership: G. Myers
Expedition 318 Postexpedition Meeting	15–18 June 2010	College Station, Texas	LDEO: T. Williams
International Working Group Plus (IWG+) Meeting	16–18 June 2010	Kyoto, Japan	Ocean Leadership: D. Divins
Hazardous Goods Transportation Training	20–25 June 2010	Seattle, Washington	TAMU: L. Crowder
Engineering Meeting with Research Partnership to Secure Energy for America (RPSEA)	22 and 23 June 2010	Houston, Texas	Ocean Leadership: G. Myers
Laboratory System Review Team Meeting	27–29 June 2010	Victoria, British Columbia, Canada	Team Members: A. Mix, S. Hovan, S. Blair, J. Gee, A. Harris, B. Dugan, E. Solomon, H. Palike
Adelie Drift Core Sampling Party on board the *JOIDES Resolution*	27 June–2 July 2010	Victoria, British Columbia, Canada	TAMU: C. Broyles, A. Klaus, C. Peng, S. Prinz, J. Rosser, J. Smidt
U.S. Science Support Program (USSSP) Workshop	29 and 30 June 2010	Denver, Colorado	Ocean Leadership: S. Saunders LDEO: M. Reagan TAMU: A. Miller
European Consortium for Research Drilling (ECORD) Science Operator (ESO) Expedition 325 Meeting	29 June–25 July 2010	Bremen, German	TAMU: R. Kappler

*Travel associated with meetings, conferences, port call work, and nonroutine sailing activities.

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