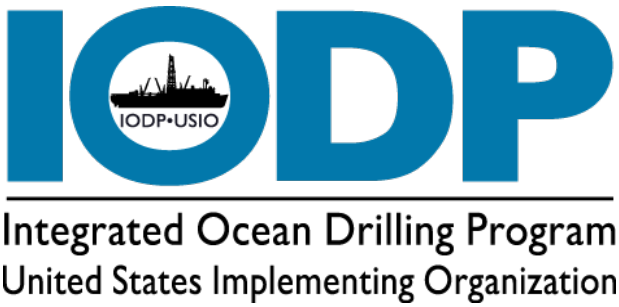
INTEGRATED OCEAN DRILLING PROGRAM

United States Implementing Organization



FY12 Quarterly Report 1

1 October–31 December 2011

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.

14 February 2012

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) FY12 Annual Program Plans to the National Science Foundation (NSF) and IODP Management International, Inc. (IODP-MI) 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. In this document, references to TAMU include Texas A&M Research Foundation (TAMRF).

MANAGEMENT AND ADMINISTRATION

The USIO provides integrated management that is led by Ocean Leadership in coordination with LDEO and TAMU. Management and Administration functions include planning, coordinating (with other IODP-related entities), overseeing, reviewing, and reporting on IODP activities.

USIO REPORTS

FY11 Q4 IODP-USIO Quarterly Report

The USIO report for the fourth quarter of FY11 (July–September 2011) was submitted to NSF and IODP-MI on 30 November 2011 (http://iodp.tamu.edu/publications/AR/FY11/FY11_Q4.pdf).

FY11 Annual Report

Production of the IODP-USIO FY11 Annual Report continued, and the final version of the report was submitted to the USIO Systems Management Team for review.

REPORTING AND LIAISON ACTIVITIES

The USIO reports to and liaises with funding agencies and IODP-related agencies (e.g., the Science Advisory Structure [SAS]), Program Member Offices (PMOs), and other national organizations, and participates in SAS panels, IODP-MI task forces, working groups, and so on.

Meetings

Standard SAS committee and panel, IODP working group, task force, and other special meetings are listed in the Conference and Meeting Schedule below. USIO attendees to all meetings are listed in “Appendix B: Travel.” Minutes for SAS meetings are available online through

committee and panel links from the meeting schedule web page (http://www.iodp.org/meeting-schedule/). IODP working group, task force, and other special meetings are described in this section.

Data Management Coordination Group

A Data Management Coordination Group (DMCG) technical meeting was held 7–9 November 2011 in Washington, DC. USIO representatives participated in discussions about the Scientific Earth Drilling Information Service (SEDIS) III project, Sample and Data Request Management (SDRM) v2 development, and other data management–related projects.

Conference and meeting schedule

Conference/Meeting*	Date	Location
International Conference on Asian Marine Geology (ICAMG) IODP Session	10–14 October 2011	Goa, India
Data Management Coordination Group (DMCG) Technical Meeting	7–9 November 2011	Washington, DC
Proposal Evaluation Panel (PEP) Meeting	1–3 December 2011	San Francisco, California
IODP Town Hall Meeting (American Geophysical Union Fall 2011 Meeting)	6 December 2011	San Francisco, California

*Implementing organization meetings, IODP-MI task force meetings, Science Advisory Structure (SAS) panel meetings, and Program-sponsored conferences.

OTHER LIAISON ACTIVITIES

In December 2011, USIO representatives traveled to Brasilia, Brazil, to meet with the Director of Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES), the President, and a group of ten scientists from throughout Brazil to discuss Brazil's participation in IODP.

CONTRACT SERVICES

Ocean Leadership

Contract activity

Ocean Leadership received the following modifications during the reporting period.

NSF Contract OCE-0352500 with Ocean Leadership

- Modification 52: Incrementally funded the FY12 Annual Program Plan in the amount of $30,000,000.

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

- Modification 38: Incrementally funded the FY12 Annual Program Plan in the amount of $1,000,000.

Subcontract activity

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

Ocean Leadership Subcontract JSC 4-03 with LDEO

- Modification 51: Approved the FY12 Annual Program Plan dated 4 August 2011 in the amount of $7,598,936 and provided $1,130,772 in incremental funding toward FY12 activities.
- Modification 52: Provided $129,028 of funding toward IODP Expedition 334 activity.
- Modification 53: Added a Statement of Work Addendum that provides for alternative use of the *JOIDES Resolution*.
- Modification 54: Provided $3,169,749 of incremental funding toward FY12 activities.

Ocean Leadership Subcontract JSC 4-02 with TAMRF

- Modification 62: Approved the FY12 Annual Program Plan dated 4 August 2011 in the amount of $61,937,491 and provided $9,128,517 in incremental funding toward FY12 activities.
- Modification 63: Provided $26,031,938 of incremental funding toward FY12 activities.
- Modification 64: Added a Statement of Work Addendum that provides for alternative use of the *JOIDES Resolution*.
- Modification 65: Provided $679,918 of incremental funding toward FY12 activities.

LDEO

Subcontract activity

LDEO issued the following subcontract modifications during the reporting period.

LDEO subcontract with Schlumberger

- Amendment 01: Provided the first FY12 funding increment in the amount of $400,000.

LDEO subcontract with Leicester University

- Amendment 16: Provided the first FY12 funding increment in the amount of $75,000.

TAMRF

Subcontract activity

TAMRF issued the following subcontract modifications during the reporting period.

TAMRF subcontract with Overseas Drilling Limited

- Amendment 16: Provided incremental funding in the amount of $6,250,000.

Miscellaneous activity

- 28 October: Submitted the Annual Property Inventory Reports to Ocean Leadership.
- 28 October: Submitted the Individual Subcontract Report containing small and disadvantaged award data for the period of 1 April through 30 September 2011 to Ocean Leadership.

- 28 October: Submitted the Summary Subcontract Report containing consolidated small and disadvantaged award data for the period of 1 October 2010 through 30 September 2011 to the National Science Foundation.
- 22 November: Submitted the FY11 Federal Automotive Statistical Data Tool, reporting TAMRF's vehicle fleet data, to NSF.

Insurance related to Ocean Leadership subcontracts

The program of contractually required insurances for FY12 was placed with underwriters and carriers this quarter. After completion of the negotiated underwriting, FY12 insurance was priced 9% lower than the same insurances in FY11.

PERSONNEL STATUS

Ocean Leadership

No positions were vacated during the quarter.

The following positions were opened and advertised during the quarter:

- Communications Manager

The following positions were filled during the quarter:

- Communications Manager (Matthew Wright): 7 November 2011

LDEO

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

TAMU

The following position was vacated during the quarter:

- Applications Developer III (Long Nguyen): 14 November 2011

The following positions were opened and advertised during the quarter:

- Applications Developer III
- Systems Administrator

The following positions were filled during the quarter:

- Curatorial Specialist I (Gemma Barrett): 12 December 2011
- Graphics Specialist II (Jean Wulfson): 9 December 2011

USIO WEB SERVICES

The USIO website 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.

USIO website statistics

USIO website	FY12 Q1 page views*	FY12 Q1 site visits*
www.iodp-usio.org	18,892	12,102
iodp.ldeo.columbia.edu	7,791	1,211
iodp.tamu.edu	350,132	69,143
Total	**376,815**	**82,456**

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

LEGACY DOCUMENTATION

The USIO routinely archives electronic copies of documents and reports produced on behalf of IODP.

Legacy digital library

Legacy preservation activities include storing electronic copies of relevant management and administration–related documents and reports produced by the USIO. Documents and publications archived this quarter in a dedicated Content Management System (CMS) included the FY11 Q4 IODP-USIO Report and contract modifications.

Additionally, per Subcontract IODP-MI-05-03 Modification #36, the USIO completed the preparation and organization of numerous Deep Sea Drilling Project (DSDP) and pre-1998 Ocean Drilling Program (ODP) legacy documents previously stored at the former ODP JOIDES office (Rosenstiel School of Marine and Atmospheric Science [RSMAS], University of Miami). These documents are scheduled to be digitized by a document-scanning vendor in January 2012 and later stored in an upgraded dedicated CMS. Relevant documents will also be posted on the ODP legacy website.

Legacy web services

Key data, documents, and publications produced during the DSDP and ODP are preserved in the legacy websites, which highlight the scientific and technical accomplishments of these ground-breaking precursors to IODP. The legacy websites contain downloadable documents that cover a wide spectrum of Program information, from laboratory and instrument manuals to all of the Program's scientific publications, journals, and educational materials.

The ODP Science Operator website and the DSDP Publications website are hosted at TAMU. The ODP legacy website is hosted at Ocean Leadership.

Legacy website statistics

Legacy website	FY12 Q1 page views*	FY12 Q1 site visits*
www-odp.tamu.edu	1,117,680	265,862
www.odplegacy.org	3,079	1,262
www.deepseadrilling.org	154,597	40,122
Total	**1,275,356**	**307,246**

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

OTHER PROJECTS AND ACTIVITIES

USIO-TAMU Project Portfolio Management program

The USIO-TAMU management team completed its review of three potential projects (User Data Editing Tool; Sample Master Revision; and Common Logger Graphical User Interface) and also requested the development of a charter for the DESCLogik Web Reporting Tool. One or two of these large projects will be selected in late January for further project management planning and execution.

TECHNICAL, ENGINEERING, AND SCIENCE SUPPORT

The USIO is responsible for planning, managing, coordinating, and performing activities and providing services, materials, platforms, and ship- and shore-based laboratories for IODP-USIO expeditions; long-range operational planning for out-year USIO expeditions; and technical advice and assistance for European Consortium for Ocean Research Drilling (ECORD) Science Operator (ESO) and Center for Deep Earth Exploration (CDEX) expeditions.

USIO EXPEDITION SCHEDULE

At the end of the quarter, the USIO was informed of corrosion issues in the sea chest of the *JOIDES Resolution* that will require a brief dry dock to repair. This repair period will also require a schedule revision in the early part of the next quarter.

Expedition		Port (Origin)	Dates[1, 2]	Total Days (Port/ Sea)	Days at Sea (Transit[3]/ Ops)	Co-Chief Scientists	USIO Contacts[4]
Mid-Atlantic Ridge Microbiology	336	Bridgetown, Barbados	16 September–17 November 2011	62 (2/60)	60 (10/50)	K. Edwards, W. Bach	TAMU: A. Klaus* LDEO: L. Anderson^
Mediterranean Outflow	339	Ponta Delgada, Azores (Portugal)	17 November 2011–17 January 2012	61 (5/56)	56 (5/51)	J. Hernández-Molina, D. Stow	TAMU: C. Alvarez Zarikian* LDEO: T. Williams^
Atlantis Massif Oceanic Core Complex	340T	Lisbon, Portugal	17 January–6 February 2012	20 (5/15)	15 (12/3)	D. Blackmon	LDEO: A. Slagle^
Lesser Antilles Volcanism and Landslides[5]	340	Antigua	6 February–18 March 2012	41 (1/40)	40 (2/38)	A. Le Friant, O. Ishizuka	TAMU: N. Stroncik* LDEO: A. Slagle

Expedition		Port (Origin)	Dates[1, 2]	Total Days (Port/ Sea)	Days at Sea (Transit[3]/ Ops)	Co-Chief Scientists	USIO Contacts[4]
Non-IODP [18 March–18 June 2012]							
Newfoundland Sediment Drifts[6]	342	Curaçao	18 June–17 August 2012	60 (4/56)	56 (11/45)	TBD	TAMU: P. Blum LDEO: A. Fehr^
Non-IODP							
Costa Rica Seismogenesis Project (CRISP) 2	344	Curaçao	22 October–17 December 2012	56 (3/53)	53 (8/45)	TBD	TAMU: K. Petronotis* LDEO: A. Malinverno^
Hess Deep Plutonic Crust	345	Puntarenas, Costa Rica	17 December 2012–16 February 2013	61 (5/56)	56 (11/45)	TBD	TAMU: A. Klaus* LDEO: G. Guerin^
Non-IODP [16 February–27 May 2013]							
Southern Alaska Margin Tectonics, Climate & Sedimentation[6]	341	Victoria, British Columbia (Canada)	27 May–27 July 2013	61 (3/58)	58 (8/50)	J. Jaeger, S. Gulick	TAMU: N. Stroncik* LDEO: H. Evans^
Transit	346T	Victoria, British Columbia (Canada)	27 July–18 August 2013	22 (5/17)			
Asian Monsoon	346	Hakodate, Japan	18 August–26 September 2013	39 (1/38)	38 (1/37)	TBD	TAMU: C. Alvarez Zarikian* LDEO: TBD

Notes: TBD = to be determined.
[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] Expedition includes engineering test of the Motion Decoupled Hydraulic Delivery System.
[6] The end port for Expedition 341 is tentative. Alternative ports that may reduce transit times are being investigated.

USIO EXPEDITIONS

Expedition 336: Mid-Atlantic Ridge Microbiology

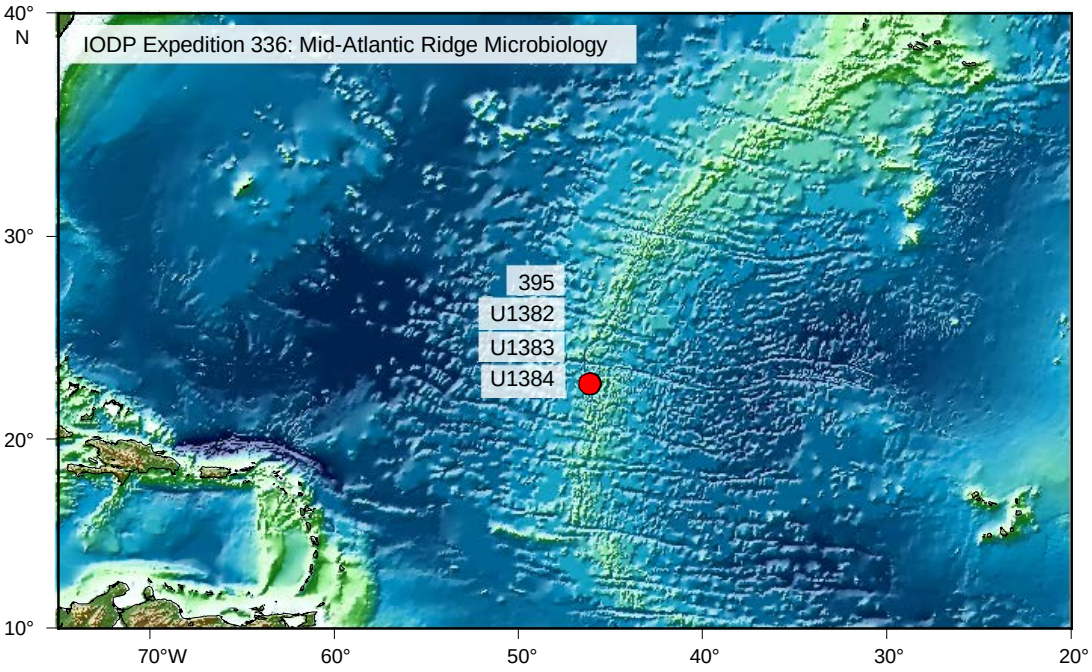
Staffing

Expedition 336 Science Party staffing breakdown	
Member country/consortium	**Participants**
USA: United States Science Support Program (USSSP)	8
Japan: Japan Drilling Earth Science Consortium (J-DESC)	4
Europe and Canada: European Consortium for Ocean Research Drilling (ECORD) Science Support and Advisory Committee (ESSAC)	7
Republic of Korea: Korea Integrated Ocean Drilling Program (K-IODP)	1
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*

*Visa issues prevented a scientist from India from sailing on the expedition.

An unused berth was provided to a third-party atmospheric microbiologist who had sailed previously during ODP to acquire atmospheric samples.

Site map



Coring summary

Site	Hole	Latitude	Longitude	Water depth (m)	Cores (n)	Interval cored (m)	Core recovered (m)	Recovery (%)
395	395A	22°45.3519'N	046°04.8609'W	4484.0	0	0.0	0.00	0.0
U1382	U1382A	22°45.3531'N	046°04.8911'W	4494.0	11	100.0	31.79	32.0
	U1382B	22°45.3528'N	046°04.8748'W	4494.0	12	98.8	84.28	85.0
				Site U1382 Totals:	**23**	**198.8**	**116.07**	**58.0**
U1383	U1383A	22°48.1229'N	046°03.1661'W	4425.2	0	0.0	0.00	0.0
	U1383B	22°48.1328'N	046°03.1556'W	4425.2	0	0.0	0.00	0.0
	U1383C	22°48.1241'N	046°03.1662'W	4425.2	31	262.0	50.31	19.0
	U1383D	22°48.1316'N	046°03.1628'W	4425.2	7	44.3	48.65	110.0
	U1383E	22°48.1283'N	046°03.1582'W	4425.2	7	44.2	50.28	114.0
				Site U1383 Totals:	**45**	**350.5**	**149.24**	**43.0**
U1384	U1384A	22°48.7086'N	046°05.3464'W	4475.9	12	96.2	94.09	98.0
				Site U1384 Totals:	**12**	**96.2**	**94.09**	**98.0**
Expedition 336 Totals:					**80**	**645.5**	**359.40**	**56.0**

Logging summary

The Deep Exploration Biosphere Investigative tool (DEBI-t), a new downhole logging tool for detecting in situ microbial life in ocean floor boreholes, was used for the first time during Expedition 336. During the reporting period, two holes were logged with tool strings that included the DEBI-t and measurements of spectral gamma ray, temperature, density, electrical resistivity, electrical images, and elastic wave velocity. In the 106 m interval logged in Hole U1382A, downhole electrical images were matched with images of the external surfaces of

whole-round cores, and logging results (density and K/U ratios) constrained the depth of a peridotite interval from 165 to 167 meters below seafloor (mbsf). Logging data acquired in the 275 m interval logged in Hole U1383C assisted in the interpretation of the volcanic units drilled (basalt flows, pillows, breccias, and hyaloclastites).

Science results

Expedition 336 successfully initiated subseafloor observatory science at a young mid-ocean-ridge flank setting. All of the drilled sites are located in the North Pond region of the Atlantic Ocean (22°45'N, 46°05'W) in 4414–4483 m water depth. This area is known from previous ocean drilling and site survey investigations as a site of particularly vigorous circulation of seawater in permeable 8 Ma basaltic basement underlying a <300 m thick sedimentary pile. Understanding how this seawater circulation affects microbial and geochemical processes in the uppermost basement was the primary science objective of Expedition 336.

Basement was cored and wireline-logged in Holes U1382A and U1383C. In the upper oceanic crust in Hole U1382A, which is only 50 m west of DSDP Hole 395A, 32 m of core was recovered between 110 and 210 mbsf. Core recovery in basement was 32%, yielding a number of volcanic flow units with distinct geochemical and petrographic characteristics. A unit of sedimentary breccia containing clasts of basalt, gabbroic rocks, and mantle peridotite found intercalated between two volcanic flow units was interpreted as a rock slide deposit. From Hole U1383C, 50.3 m of core was recovered between 69.5 and 331.5 mbsf (19.2%). The basalts are aphyric to highly plagioclase-olivine-phyric tholeiites that fall on a liquid line of descent controlled by olivine fractionation. They are fresh to moderately altered, with clay minerals (saponite, nontronite, and celadonite), Fe oxyhydroxide, carbonate, and zeolite as secondary phases replacing glass and olivine to variable extents.

Sediment thickness was ~90 m at Sites U1382 and U1384 and varied between 38 and 53 m at Site U1383. The sediments are predominantly nannofossil ooze with layers of coarse foraminiferal sand and occasional pebble-size clasts of basalt, serpentinite, gabbroic rocks, and bivalve debris. The bottommost meters of sections cored with the advanced piston corer feature brown clay. Extended core barrel coring at the sediment/basement interface recovered <1 m of brecciated basalt with micritic limestone. Sediments were intensely sampled for geochemical pore water analyses and microbiological work. In addition, high-resolution measurements of dissolved oxygen concentration were performed on the whole-round sediment cores.

During Expedition 336, two fully functional observatories were installed in newly drilled holes (U1382A and U1383C) and an instrument and sampling string were placed in an existing hole (395A). Although the CORK wellhead in Hole 395A broke off and Hole U1383B was abandoned after a bit failure, these holes and installations are intended for future observatory science targets. The CORK observatory in Hole U1382A has a packer seal in the bottom of the casing and monitors/samples a single zone in uppermost oceanic crust extending from 90 to 210 mbsf.

Hole U1383C was equipped with a three-level CORK observatory that spans a zone of thin basalt flows with intercalated limestone (~70–146 mbsf); a zone of glassy, thin basaltic flows and hyaloclastites (146–200 mbsf), and a lowermost zone (~200–331.5 mbsf) of more massive pillow flows with occasional hyaloclastites in the upper part.

Expedition 339: Mediterranean Outflow

Planning

One Expedition 339 Co-Chief Scientist and two lead sedimentologists were introduced to the DESCLogik core description system through a workshop held at TAMU on 5 and 6 October 2011. Efforts continued toward finalizing data workflow with Correlator and completing web reports to allow easy access to correlation results. Final planning was completed for port call logistics and outreach activities, including extensive tours to be conducted in Ponta Delgada, Azores.

Staffing

Expedition 339 Science Party staffing breakdown	
Member country/consortium	**Participants**
USA: United States Science Support Program (USSSP)	8
Japan: Japan Drilling Earth Science Consortium (J-DESC)	6
Europe and Canada: European Consortium for Ocean Research Drilling (ECORD) Science Support and Advisory Committee (ESSAC)	10
Republic of Korea: Korea Integrated Ocean Drilling Program (K-IODP)	1
People's Republic of China: IODP-China	1
Australia and New Zealand: Australia/New Zealand IODP Consortium (ANZIC)	1
India: Ministry of Earth Science (MoES)	1

Clearance and permitting activities

A request was submitted on 12 October to the Environmental Protection and Safety Panel (EPSP) and TAMU Safety Panel to extend the depth of GC-09A by 350 m to 1134 mbsf based on a reassessment by the Co-Chief Scientists. The Co-Chief Scientists provided additional requested data and analysis and, on 5 December, the EPSP chair and TAMU Safety Panel recommended an extension request to 870 mbsf.

Authorization to drill in Portugal's exclusive economic zone (EEZ) was received on 4 November, with one named observer. An addendum was submitted on 30 November to extend the total drilling depth for Site GC-09A, and approval was received on 14 December.

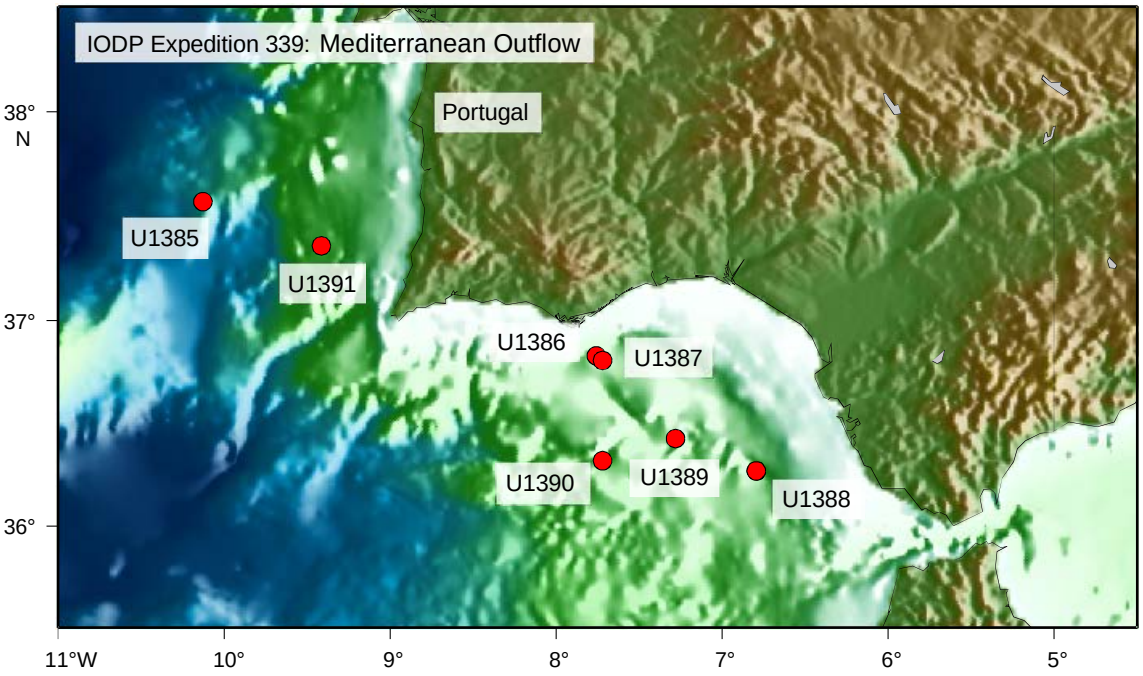
Authorization to drill in Spain's EEZ was received on 10 October with the addition of two named observers and restrictions on the use of drilling mud. The USIO responded with a request for clarification of the drilling mud restriction, also noting that only one berth space was available for an observer. In response to the clarification of concerns, the USIO worked with the Spanish Co-Chief Scientist submitted a detailed map, assessment of drilling mud use, and documentation that there would be no adverse impact for any areas of concern. Authorization

was received on 7 November without restrictions on the use of drilling mud and with only one named observer.

Environmental assessment

NSF approved vertical seismic profile (VSP) operations.

Site map



Logging summary

During the reporting period, three holes were logged with the triple combination and Formation MicroScanner-sonic tool strings (U1386C, U1387C, and U1389A). Successful check shot were also carried out with the Vertical Seismic Imager borehole seismic tool in these three holes. The High-Resolution Laterolog Array resistivity tool was run in low-resistivity formations for the first time, and compared favorably to results from the older Dual Induction Tool resistivity tool. Downhole logging was useful to characterize the sedimentary successions, which mostly consisted of sand-rich and mud-rich layers alternating on a scale of several meters (contourite sequence). The high contrast in properties between the two main lithologies gave a rich character to the logs. In addition, the natural gamma ray logs helped in establishing site-to-site correlations; electrical resistivity measurements characterized salty pore waters at two of the sites; and check shot first arrival times, sonic, and density logs provided key data to link drilling results with seismic reflection sections.

Expedition 340T: Atlantis Massif Oceanic Core Complex

Planning

The Expedition 340T Chief Scientist and Staff Scientist reviewed data requests submitted by the Science Party. Planning was conducted with ECORD for extensive port call outreach, events, and tours.

Staffing

All science positions were finalized during the quarter. Education and outreach staffing is still pending.

Environmental assessment

The environmental evaluation report for the VSP was completed and submitted to NSF. Permission to conduct VSP work was granted on 20 December 2011.

Expedition 340: Lesser Antilles Volcanism and Landslides

Planning

Review of Expedition 340 sample requests and research plans was initiated during the quarter, and inclusion of a third-party fall cone analytical tool was reviewed and approved. Final logistical planning concluded with surface freight shipped to Lisbon, Portugal, and air freight scheduled for the beginning of the next quarter.

Clearance and permitting activities

An addendum to the clearance application was submitted on 5 October to include new locations for sites that were shifted due to proximity to submarine cables. New sites were reviewed and approved by the EPSP.

Environmental assessment

The environmental evaluation report was completed and sent to NSF for review. Permission to conduct VSP work was granted on 20 December 2011.

Expedition 342: Newfoundland Sediment Drifts

Planning

The Expedition 342 *Scientific Prospectus* was completed and posted online on 30 November. A postexpedition sampling party is anticipated. The Motion Decoupled Hydraulic Delivery System (MDHDS) proponent group's planning efforts continued this quarter, and a downhole test of the mechanical components of the tool was scheduled to take place at the Schlumberger test well at the end of January.

Staffing

Nominations were received from the PMOs this quarter. Thirteen scientists were invited and accepted in the first round, and a second round of invitations was initiated.

Clearance and permitting activities

Notice was submitted to the Bureau of Ocean Energy Management (BOEM) on 2 December 2011 of the dates and objectives of the MDHDS test, which will occur in U.S. waters at Site 1073 offshore New Jersey.

Expedition 344: Costa Rica Seismogenesis Project 2

Planning

The Expedition 344 pre-expedition meeting was scheduled for January 2012. The Co-Chief Scientists asked about locating new sites on the 3-D seismic grid that was collected following Expedition 334 (CRISP 1). In response, the USIO provided the procedure and timeline for submission of new sites.

Staffing

Two Co-Chief Scientist invitations were issued and accepted during the quarter. Science Party member applications were due to the PMOs on 15 December.

Clearance and permitting activities

Expedition 344 sites are in the Costa Rican EEZ. An application will be submitted ~7 months before the expedition. All sites have been reviewed by EPSP, unless additional sites are submitted.

Expedition 345: Hess Deep Plutonic Crust

Planning

During Expedition 336, USIO staff met with the Siem Offshore personnel that will sail during Expedition 345 to discuss operational options. USIO staff also discussed operational options with the Expedition 345 Co-Chief Scientists to refine ideas and plans in preparation for the pre-expedition meeting scheduled for January 2012.

Staffing

Two Co-Chief Scientist invitations were issued with one declined, and a third invitation was issued and accepted.

Expedition 341: Southern Alaska Margin Tectonics, Climate, and Sedimentation

Planning

Investigation and elimination of Alaskan ports for Expedition 341 continued, with one possible port remaining. Final investigations will be completed during the next quarter.

Clearance and permitting activities

Notice was submitted to BOEM on 2 December of the dates and objectives of Expedition 341, which will take place in U.S. waters. Expedition 346: Asian Monsoon

Planning

Investigation of a possible Alaskan port for Expedition 346 continued. Use of the Alaskan port would reduce the transit by ~4 days that could be added to Expedition 346 operations.

Staffing

One Co-Chief Scientist invitation was issued at the end of the quarter.

Clearance and permitting activities

Expedition 346 sites are in Japan's EEZ, with the exception of one site that is in the Republic of Korea EEZ. An application will be submitted through the U.S. State Department ~7 months before the expedition.

ANALYTICAL SYSTEMS

Analytical Systems acquisitions and updates

Analytical systems acquired during the previous quarter were received (with one exception) and installed on the *JOIDES Resolution.* The Agico JR-6A spinner magnetometer arrived from the manufacturer having suffered damage to its housing in transit. The housing was returned to Agico for replacement.

Laboratory working groups

Geochemistry

The Geochemistry Laboratory Working Group (LWG) discussed the CHNS analyzer with an eye toward better analysis for sulfur without compromising carbon/nitrogen analysis. Acquisition of a separate S analyzer was considered, but the consensus was to develop separate methodology for S and C/N and to provide the Science Party with the ability to do separate S and C/N analysis. While this would require additional sample weighing, it would also provide the best results for each analyte.

Geophysics

The Geophysics LWG discussed various physical properties issues including the placement of the thermal conductivity system to protect it from drafts and provide more stable baseline results. The group approved the consolidation of underway geophysics responsibilities to the Laboratory Officer (LO) and Assistant LOs. Work on a laser surface profiler to replace a single-line laser profiler on the Section-Half Multisensor Logger (SHMSL) was described. The group discussed the need for the whole-round loggers to handle odd sections (e.g., missing top, missing interval from whole-round sampling) and the need to calibrate the gamma ray attenuation (GRA) system in two line segments (air-to-water and water-to-thickest aluminum block) to avoid mathematical errors due to incompletely filled liners.

Geology

The Geology LWG recommended that TAMU (specifically, the Geology LWG) adopt formal responsibility for the maintenance, workflow, and development of the Correlator program. The LWG also requested completion of the automated brightening process for the Section-Half Imaging Logger (SHIL). A related item is the storage and reporting of the 360° composite images of the external face of whole-round sections, for which the LWG would like to see analysis codes built and a reporting tool developed. The LWG also recommended testing of the suitability of Canon 5D Mark DLSR cameras, such as that used on the thin section imager, for capturing microscope images. The Canon camera and its software are much more user friendly than the SPOT camera, but may not have the low-light sensitivity needed for the application.

Curation

The Curation LWG discussed rearranging the port side of the core laboratory to better accommodate additional core rack storage. The LWG also discussed the need for a protocol to help control frozen shipment costs. The Curator submitted the requested protocol, which will be communicated to the Expedition Project Managers, shipboard curatorial staff, and Sample Allocation Committee (SAC) members. The LWG also discussed the Sample Master revision charter and made recommendations for the project scope and requirements, once that project gets under way.

Projects and other activities

Geosciences Laboratory (ODASES)

The TAMU Ocean Drilling and Sustainable Earth Science (ODASES) Geosciences Laboratory hosted six scientists for X-ray fluorescence (XRF) scanning projects during the quarter. The schedule for use of the XRF continues to be greater than 50% of available days. The shore-based SHIL has also been used for imaging cores when they are prepared for XRF analysis and work continues toward building a shore-based Whole-Round Multisensor Logger (WRMSL) with magnetic susceptibility, density by gamma ray attenuation, and *P*-wave velocity capabilities.

Both the WRMSL and the SHIL are part of the shipboard support infrastructure, but are available on a time-available basis for the use of visiting scientists.

ENGINEERING SUPPORT

Engineering equipment acquisitions and updates

The USIO began an investigation into replacing the almost 30 year old vibration-isolated television downhole camera, sonar, and transmission electronics. Planning of the scope, budget, and schedule for this critical undertaking was initiated during this quarter and will be finalized during the second quarter.

Projects and other activities

Large diameter pipe-handling infrastructure

Blohm & Voss (B&V) provided a matrix of elevator weights comparing three options: side-door elevators with bushings, side-door elevators bored for 6-5/8 inch pipe, and center-latch elevators with bushings. Based on a review of these elevator weight and size specifications, the USIO asked B&V to provide detailed engineering drawings of the insert version of the 350- and 500-ton elevators. When the designs are completed, USIO and Howard and Associates personnel will review the drawings before proceeding to manufacturing.

In addition, based on the preliminary review, the USIO felt that the current handler could handle the new elevators. After the drawings are approved, the new elevators will be manufactured and tested with the current handler to determine whether a stronger handler is necessary.

Magnetic Susceptibility Sonde rebuild

Development of the deep-reading and high-resolution sensors was completed. One of the deep-reading sensors (DR3) was successfully tested and will be shipped to Lisbon, Portugal, with a temporary nonmagnetic housing for availability during Expeditions 340T and 340. Fabrication of the permanent nonmagnetic housing is still under way, as problems with the seals between the composite and nonmagnetic metal field joints were encountered during pressure tests. Completion of remaining tasks, bench testing, and deployment of both tools at the LDEO test well is anticipated during the second quarter of FY12, with potential at-sea deployment of the entire magnetic susceptibility sonde (MSS)-B assembly during Expedition 342.

Multifunction telemetry module projects

The Multifunction Telemetry Module (MFTM) transmits third-party tool downhole data back to the surface in real time. The MFTM has been developed for projects such as the DEBI-t, the MDHDS, and the Simple Cabled Instrument for Measuring In-Situ Parameters (SCIMPI) (see “MFTM for SCIMPI Deployment” in “Engineering Development” for more information).

The DEBI-t project was a collaborative effort between the USIO, University of Southern California, National Aeronautic and Space Administration Jet Propulsion Laboratory, and Photon Systems, Inc., wherein the MFTM provided the means to monitor DEBI-t data in real time while in combination with other LDEO third-party and Schlumberger tools. During Expedition 336, the DEBI-t and MFTM were successfully deployed in Holes 395A and U1382A in an attempt to measure borehole temperature and biomass on the borehole wall. The results from the expedition show the presence and quantitative abundance of microbial life in a borehole within young igneous ocean crust using deep ultraviolet-induced native fluorescence.

The MDHDS project is a collaborative development between the USIO, University of Texas–Austin, Massachusetts Institute of Technology, and Mohr Engineering, wherein the MFTM will allow real-time monitoring of formation temperatures and pressures while the penetrometer is decoupled from the drill string. Final testing of the MDHDS was scheduled for April 2012 at the Schlumberger Genesis rig facilities, and at-sea deployment was targeted for the transit beginning Expedition 342, dependent on positive results during the final test.

Wireline heave compensating system

The USIO and Schlumberger continued data collection under different conditions (i.e., water depth, heave, and so on) prior to beginning logging operations in open holes for optimizing the system's capabilities. The USIO will continue to routinely assess results and work with Schlumberger to optimize the system.

Engineering development: Drilling Sensor Sub

The two Drilling Sensor Sub tools were shipped to the vendor (APS Technologies) for diagnostics and a quote for any needed calibrations. The diagnostics report was received in December, but the cost quote for calibrations was delayed into January.

LEGACY DOCUMENTATION

The USIO routinely archives electronic copies of documents and reports produced on behalf of IODP. Legacy preservation activities for Technical, Engineering, and Science Support include storing electronic copies of expedition daily, weekly, and site summary reports; appropriate operations and engineering reports; and other technical documentation.

ENGINEERING DEVELOPMENT

The USIO is responsible for utilizing IODP resources to oversee and/or provide engineering development projects in accordance with the long-term engineering needs of IODP as prioritized by the SAS.

MULTISENSOR MAGNETOMETER MODULE

The multisensor magnetometer module (MMM) is a new magnetometer tool under development at LDEO. The MMM will provide the capability to work in both strongly magnetized hard rock formations and in sediments with weaker magnetizations and will produce continuous records of the magnetic field in the borehole, from which magnetization and polarity of the rocks surrounding the borehole can be calculated. The tool will also provide borehole and tool orientation data and will measure the borehole field on three axes, allowing calculation of the full formation magnetization vector: inclination, declination, and total field intensity. This downhole magnetic information will complement core sample magnetic measurements and significantly enhance IODP's ability to magnetostratigraphically date sediment sequences.

FY12 deliverables for this multi-year project include tool delivery, modifications to extend LDEO and Schlumberger telemetry systems and surface panel software, completion of third-party tool certification requirements, bench and field tests at the LDEO test well, and at-sea deployment.

Project status

Problems with the seals between the composite material and the non-magnetic metal field joints were encountered during pressure testing. The USIO is working with the pressure housing manufacturer to correct these problems. Work on the electronics boards continued. Bench testing is expected in Spring 2012, with test well deployment following in Summer 2012. A subsequent first-expedition deployment could be targeted in early FY13.

USIO TECHNICAL PANEL

The new USIO Technical Panel (UTP) will include external members from industry and academia who will participate in bi-annual meetings to review engineering and operations issues within the USIO. The UTP will be created during FY12, and will be administered and operated by Ocean Leadership with assistance from the USIO partners.

Project status

The UTP created a Terms of Reference document, membership list, and the agenda for the first meeting, which is scheduled for 27 and 28 March 2012 in College Station, Texas. Invitations were sent to five external members from industry and approximately ten internal members and guests to attend two UTP meetings per year.

MFTM FOR SCIMPI DEPLOYMENT [FY11 PROJECT]

The SCIMPI is a borehole observatory sensor system that incorporates established modular technology to capture data from subseafloor sensors over long time periods (months to years)

to measure in situ physical and hydrogeological properties in IODP boreholes. The FY11 MFTM for SCIMPI deployment project was a collaborative effort between the USIO; University of Rhode Island; Transcend Engineering & Technology, LLC; and Woods Hole Oceanographic Institute, wherein an MFTM was built to maintain communications with the SCIMPI string to confirm that all the instrument packages are functioning properly prior to deployment.

Project Status

The MFTM for the SCIMPI project was finalized, with successful communications and release tests conducted at LDEO in late November 2011. These tests included the entire SCIMPI sub-seafloor package (nine instrument pods), the Electronic Release System, MFTM, cable head, and 20,000 feet of wireline.

CORE CURATION

The USIO provides services in support of IODP core sampling and curation of the core collection archived at the Gulf Coast Repository (GCR).

CURATION STRATEGIES AND EXPEDITION CORE SAMPLING

The USIO planned sample and curation strategies for Expedition 340. USIO Curatorial Specialists supervised shipboard core sampling during Expeditions 336 and 339 and reviewed all shipboard and moratorium-related requests in coordination with the other members of the expedition SACs.

SAMPLE MATERIALS CURATION SYSTEM

The programmer continued work on final revisions to the new sample request software, and the release date of the modified program for final testing by the user community was pushed back to the second quarter.

CORE CURATION

All IODP core sample requests are handled by the GCR, Bremen Core Repository, and Kochi Core Center. The USIO conducted all responsibilities associated with curation of core collections at the GCR, providing services in support of core sampling, analysis, and education.

Repository activity

The following “Sample requests” table provides a summary of the 5,212 samples that were taken during the quarter. Sample requests that show zero samples taken represent cores that were viewed by visitors during the quarter. Public relations tours and educational visits to the repository are shown in the “GCR tours/visitors” table.

Sample requests

Sample request number, name, country	Number of samples taken
22506A, Tsunogai, Japan	12
1367IODP, Xuan, China	535
1374IODP, Shackford, USA	96
22362B, Yanchilina, USA	46
1377IODP, Murphy, Australia	77
22498A, Li, China	151
22483A, Higgins, USA	62
22488A, Anagnostou, United Kingdom	54
22493A, Veenstra, Netherlands	15
1378IODP, Veenstra, Netherlands	30
1384IODP, Cook, United Kingdom	15
22057B, Scudder, USA	121
22170F, Stepanova, Russia	73
1380IODP, Richaud, USA	63
22446A, Thomas, USA	0
22476A, Beltran, France	58
1355IODP, Baldauf, USA	67
22486A, Thomas, USA	0
22475A, Roark, USA	18
1357IODP, Shackford, USA	18
1217IODP, Hermann, USA	35
22468A, Jacobel, USA	572
22480A, Paytan, USA	29
22465A, Wortmann, Canada	23
22461A, Jiang, USA	156

Sample request number, name, country	Number of samples taken
22255B, Osborne, Germany	26
22450A, Hodell, United Kingdom	866
22474A, Gorjan, USA	42
22466A, Frelson, France	3
1064IODP, Vadakkeyakath, India	19
1359IODP, Erhardt, USA	26
22463A, Ingham, Australia	113
22371B, Sageman, USA	27
21546C, Le Houedec, France	22
22205B, Paull, USA	6
22295A, Barnes, USA	6
22041C, Caballero Gill, USA	1,017
22455A, Hurtgen, USA	43
22455B, Hurtgen, USA	19
1230IODP, Tauxe, USA	211
22457A, Tzanova, USA	43
22404A, Bralower, Australia	235
1293IODP, Bohaty, United Kingdom	15
22462A, Schubert, USA	21
1199IODP, Hertzberg, USA	17
1319IODP, Zarikian, USA	3
1320IODP, Zarikian, USA	3
22432A, Redman, USA	0
22440A, Head, Canada	103
Total	**5,212**

GCR tours/visitors

Type of tour or visitor	Number of Visitors
Scientist visitors	19
Educational tours/demonstrations (4)	80
Public relations tours (4)	37
Total	**136**

USE OF CORE COLLECTION

The USIO promotes outreach use of the GCR core collection by conducting tours of the repository (see “GCR tours/visitors” table above) and providing materials for display at meetings and museums. The repository and core collection are also used for classroom exercises. The GCR hosted four groups of undergraduate students this quarter who studied a wide variety of cores from the repository collection. The students learned how to describe

cores and interpret various geologic features. Some of the students also used the ODASES laboratory for XRF core analysis.

LEGACY DOCUMENTATION

The USIO routinely archives electronic copies of documents and reports produced on behalf of IODP, as well as DSDP and ODP legacy materials. Legacy preservation activities for Core Curation include the following four projects.

Sample request file scanning

In October 2010, the USIO began scanning ODP and DSDP paper sample request files, which contain some information that is not included in the database. The portable document format (PDF) file formats will reduce the physical storage space of these documents and will make content more accessible when there is a need to research extra information on old use of the cores. Work on this project continued during the quarter and the project is now 50% complete.

Thin section archive sample scanning

The USIO continued high-resolution digital imaging of all GCR thin section archive samples from DSDP through ODP to make them publicly available online. This project began in October 2010 with the oldest thin sections (DSDP Leg 1) and has progressed to ODP Leg 142.

Core working half imaging

The USIO conducted digital imaging of working half sections that were pulled for sampling or other scientific requests during the quarter. High-resolution images of core working halves are posted on the web for public viewing to show how much the working halves have been sampled to date (http://iodp.tamu.edu/curation/samples.html).

This routine procedure focuses on imaging only those sections that get sampled; therefore, the section list for imaging correlates with all sections that are pulled for sample requests (see the "Sample requests" table above). Resampling of previously imaged working halves also results in an updated image.

Inventory of returned sample residues

Inventory of the collection of returned DSDP, ODP, and IODP sample residues from scientists continued. This collection is larger (tens of thousands of samples) than the returned residues from the ship, for which the inventory is up to date. More than 95% of the returned sample residues from scientists are now sorted by expedition into labeled boxes. After all of the residues are sorted by expedition, the inventory of individual samples within each box will begin.

DATA MANAGEMENT

The USIO manages data supporting IODP activities, including expedition and postexpedition data, provides long-term archival access to data, and supports USIO Information Technology (IT) services. The USIO also provides database services for postmoratorium ESO and CDEX log data. Daily activities include operating and maintaining shipboard and shore-based computer and network systems and monitoring and protecting USIO network and server resources to ensure safe, reliable operations and security for IODP data and IT resources.

EXPEDITION DATA

LIMS database

Expedition 336 data were added to the Laboratory Information Management System (LIMS) database on shore. These data are currently under moratorium and available only to the Expedition 336 Science Party. Expedition 329 data were placed out-of-moratorium during this quarter.

Log database

The following data were processed and put online during the quarter:

- USIO Expedition 336, Hole 395A: standard data
- USIO Expedition 336, Holes U1382A, U1383C, U1386C, and U1387C: standard and image data
- USIO Expedition 339, Hole U1389A: standard and image data
- CDEX Expeditions 319 and 322, Holes C0009A, C0010A, and C0011A: standard and image data

Starting with Expedition 336 a new dataset, sonic waveform images, has been added to the online database. In addition, some software modifications were necessary to accommodate new data sets from Expeditions 319 and 322.

EXPEDITION DATA REQUESTS

The following tables provide information on USIO web data requests from the scientific community. Where possible, visits by USIO employees were filtered out.

Top 10 countries accessing USIO web databases						
	Janus database		LIMS database		Log database	
Rank	Country	Visitor sessions	Country	Visitor sessions	Country	Visitor sessions
1	USA	**1,162**	USA	**67**	USA	**456**
2	Germany	**440**	United Kingdom	**12**	United Kingdom	**143**
3	United Kingdom	**399**	Japan	**10**	Japan	**106**
4	Japan	**275**	Unknown Country	**10**	Norway	**71**
5	China	**140**	South Korea	**8**	China	**64**
6	Western Europe	**66**	Germany	**8**	Germany	**47**
7	Norway	**60**	China	**6**	Brazil	**38**
8	Australia	**58**	Ukraine	**6**	India	**25**
9	France	**56**	The Netherlands	**2**	Canada	**23**
10	The Netherlands	**54**	Western Europe	**2**	Spain	**22**
	Others	**524**	Others	**6**	Others	**216**
	Janus database total	**3,234**	**LIMS database total**	**137**	**Log database total**	**1,211**

Janus database web queries		
Rank	Query	Uploads
1	Point calculation	1,581
2	Imaging—photos	986
3	Sample	787
4	Site summaries	435
5	Hole trivia	374
6	Core summaries	337
7	Requests	256
8	Physical properties—downhole temperatures	187
9	Hole summaries	178
10	Physical properties—gamma ray attenuation	167
11	Imaging—prime data images	145
12	Paleo—age models	128
13	Depth calculations	122
14	Leg summaries	121
15	Physical properties—magnetic susceptibility	120
16	Chemistry—carbonates	114
17	Physical properties—moisture and density	111
18	Chemistry—rock eval	96
19	Chemistry—interstitial water	90
20	Physical properties—color	79
	Others	1,437
	Janus database total	**7,851**

LIMS database web queries	
Query type	Views
Science data	84
Samples	46
LIMS database total	**130**

Data requests submitted to the USIO-TAMU Data Librarian	
Requests	**Total**
Photo	4
Chemistry	4
Paleo	3
Sample	2
Depth	1
Coring data	1
Smear slide data	1
Special hole	1
Total	**17**

Countries submitting data requests to the USIO-TAMU Data Librarian	
Country	**Total**
USA	11
Unknown	2
Germany	1
Japan	1
The Netherlands	1
Norway	1
Total	**17**

Other USIO web statistics*		
Statistics	**Janus database**	**Log database**
Database query hits:		
Entire site (successful)	18,277	7,791
Average per day	198	86.57
Visitor sessions:		
Total number of visitor sessions	3,234	1,211
Average per day	35	13.16
Average length of visit	00:11:52	6:33
International visitor sessions	63.82%	62.35%
Visitor sessions of unknown origin	0.25%	0.00%
Visitor sessions from United States	35.93%	37.65%
Visitors:		
Unique visitors	1,785	695
Visitors who only visited once	1,308	637
Visitors who visited more than once	477	58
Average visits per visitor	1.81	1.74

PROGRAM-WIDE DATA QUERY SERVICES

LIMS Reports and LIMS Overview

Three new stratigraphic correlation reports were added to LIMS Reports in November 2011: create composite depths, splice tie points, and splice intervals for Expedition 339. Additionally, the USIO completed the LIMS Overview (drill-down) project (http://web.iodp.tamu.edu/ReportOverview/).

OPERATION, MAINTENANCE, AND SECURITY

Equipment scheduled for installation during the tie-up period in Curaçao was purchased and configured. Plans were made for all Logging office Mac Pros to be refreshed and the Xserve RAID storage device in the *JOIDES Resolution* server room to be replaced by a Netgear

ReadyNAS (network-attached storage) device. A shore-based testbed was set up to allow configuration and testing of the equipment in a simulated ship environment.

The Log database schema was adjusted to reflect the proper relationship between run/pass regardless of the number of recordings made with the same tool string. This was required as a step toward developing a more automated method of entering records into the database by parsing filenames on the data files.

SOFTWARE DEVELOPMENT

Routine software maintenance was conducted on SampleMaster, LIMS Reports, MADMax, LIMS2Excel, and DESCLogik.

LEGACY DOCUMENTATION

Legacy preservation activities for Data Management this quarter included storing electronic copies of materials documenting all information technology architecture and corresponding services configurations.

IODP inventory update

The data inventory includes data from IODP Expeditions 301–339, including ESO Expeditions 302, 310, and 313 and CDEX Expeditions 314, 319, and 322.

Other legacy projects

The headers of all ASCII files from ODP Legs 101–166 were manually edited to include units and depth reference, a step which makes them consistent with all USIO ASCII files. Plans were made to edit Legs 167–209 in the future.

PUBLICATIONS

IODP Publication Services provides publication support services for IODP riserless and riser drilling expeditions; editing, production, and graphics services for all required reports, technical documentation, and scientific publications as defined in the USIO contract with IODP-MI; and warehousing and distribution of IODP, ODP, and DSDP publications.

IODP SCIENTIFIC PUBLICATIONS

USIO publications

Scientific Prospectus

- Norris, R.D., Wilson, P.A., and Blum, P., 2011. Paleogene Newfoundland sediment drifts. *IODP Sci. Prosp.,* 342. doi:10.2204/iodp.sp.342.2011

IODP Proceedings

- D'Hondt, S., Inagaki, F., Alvarez Zarikian, C.A., and the Expedition 329 Scientists, 2011. *Proc. IODP,* 329: Tokyo (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.329.2011

CDEX publications

Scientific Prospectus

- Inagaki, F., Hinrichs, K.-U., Kubo, Y., and the Expedition 337 Project Team, 2010. Deep coalbed biosphere off Shimokita: microbial processes and hydrocarbon system associated with deeply buried coalbed in the ocean. *IODP Sci. Prosp.,* 337. doi:10.2204/iodp.sp.337.2010

IODP Proceedings

- Takai, K., Mottl, M.J., Nielsen, S.H., and the Expedition 331 Scientists, 2011. *Proc. IODP,* 331: Tokyo (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.331.2011
- Kopf, A., Araki, E., Toczko, S., and the Expedition 332 Scientists, 2011. *Proc. IODP,* 332: Tokyo (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.332.2011

Data Reports

- Guo, J., and Underwood, M.B., 2011. Data report: refined method for calculating percentages of kaolinite and chlorite from X-ray diffraction data, with application to the Nankai margin of southwest Japan. *In* Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemant, S., Screaton, E.J., Curewitz, D., Masago, H., Moe, K.T., and the Expedition 314/315/316 Scientists, *Proc. IODP,* 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.314315316.201.2011
- Hayashi, H., Asano, S., Yamashita, Y., Tanaka, T., and Nishi, H., 2011. Data report: late Neogene planktonic foraminiferal biostratigraphy of the Nankai Trough, IODP Expedition 315. *In* Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemant, S., Screaton, E.J., Curewitz, D., Masago, H., Moe, K.T., and the Expedition 314/315/316 Scientists, *Proc. IODP,* 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.314315316.206.2011
- Kopf, A., Strasser, M., Monsees, N., Underwood, M.B., and Guo, J., 2011. Data report: particle size analysis of sediments recovered during IODP Expeditions 315 and 316, Sites C0001–C0008, Nankai Trough forearc, off Japan. *In* Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemant, S., Screaton, E.J., Curewitz, D., Masago, H., Moe, K.T., and the Expedition 314/315/316 Scientists, *Proc. IODP,* 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.314315316.207.2011

- Rowe, K., Screaton, E., Guo, J., and Underwood, M.B., 2011. Data report: permeabilities of sediments from the Kumano Basin transect off Kii Peninsula, Japan. *In* Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemant, S., Screaton, E.J., Curewitz, D., Masago, H., Moe, K.T., and the Expedition 314/315/316 Scientists, *Proc. IODP,* 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.314315316.211.2011
- Guo, J., Likos, W.J., Underwood, M.B., Skarbek, R.M., Adamson, N., and Saffer, D., 2011. Data report: consolidation characteristics of sediments from Sites C0002, C0006, and C0007, IODP Expeditions 315 and 316, NanTroSEIZE Stage 1. *In* Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemant, S., Screaton, E.J., Curewitz, D., Masago, H., Moe, K.T., and the Expedition 314/315/316 Scientists, *Proc. IODP,* 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.314315316.213.2011
- Zhao, X., and Kitamura, Y., 2011. Data report: magnetic property studies of sediments and rocks from IODP Expedition 316. *In* Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemant, S., Screaton, E.J., Curewitz, D., Masago, H., Moe, K.T., and the Expedition 314/315/316 Scientists, *Proc. IODP,* 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.314315316.215.2011

USIO REPORTS

IODP Publication Services produces the USIO quarterly reports, annual reports, Annual Program Plans, and other reports as requested (see "USIO Reports" in "Management and Administration" for details on these documents).

PROGRAM-RELATED CITATION STATISTICS

Citations submitted to AGI

In November 2008, the USIO began submitting Program-related ocean drilling citations to the American Geological Institute (AGI) for inclusion in the GeoRef database and the subset Ocean Drilling Citation Database, which includes publication records related to DSDP, ODP, and IODP. The USIO submitted 358 citations to AGI this quarter.

IODP PUBLICATIONS MANAGEMENT

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 publish their papers 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 FY12 Q1	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	9
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
314/315/316	4 October 2010		27	17

Synthesis papers

Expedition	Submission deadline (26 months postmoratorium)	Deadline extensions approved in FY12 Q1	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

IODP scientific publications are the primary method of disseminating IODP research to the scientific community and the public. Initial distribution of IODP scientific publications includes more than 800 program member offices, universities, libraries, and geological organizations worldwide, and the USIO provides additional print or electronic copies of legacy publications upon request.

IODP publications website statistics

The IODP Publications website is hosted at TAMU. Traffic accessing USIO publications is monitored through publications.iodp.org.

Publications website	FY12 Q1 page views	FY12 Q1 site visits
www.iodp.org/scientific-publications	258,542	53,755

IODP digital object identifiers

IODP is a member of CrossRef, the official digital object identifiers (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 CrossRef DOI resolver tool. Statistics for the reporting quarter are shown in the table below.

Reports and publications	DOI prefix	Number of resolutions			
		October 2011	November 2011	December 2011	FY12 Q1 total
IODP	10.2204	5,336	4,013	3,018	**12,367**
ODP/DSDP	10.2973	4,532	3,843	3,442	**11,817**

PUBLICATIONS SUPPORT

The USIO provided Publications Specialist services during USIO Expeditions 336 and 339.

TECHNICAL DOCUMENTATION

Technical documents produced by the USIO are available to users via the Cumulus web client (http://iodp.tamu.edu/tasapps/) once they reach the technical draft stage. Technical documents in production during the first quarter of FY12 are shown in the table below.

Technical documentation	FY12 Q1 status
Quick start guides	
Section-Half Imaging Logger (SHIL)	Pending technical review
Section-Half Multisensor Logger (SHMSL)	Pending technical review
Whole-Round Multisensor Logger (WRMSL)	Pending technical review
Discrete Analyzer	Released V1.1
Ion Chromatograph	Technicians updating content
User guides	
Natural Gamma Radiation Logger	Pending technical review
SHIL	Pending technical review
Source Rock Analyzer	Pending technical review
Coulometer	Pending final review
Discrete Analyzer	Released V1.1
Gas Chromatograph (GC3)/Natural Gas Analyzer (NGA)	Released V1.0
Ion Chromatograph	Technicians updating content

Technical documentation	FY12 Q1 status
Chloride (Autotitrator)	Pending technical review
Advanced User Guides	
Source Rock Analyzer	Pending technical review
GC3/NGA	Released V1.0
Combined User Guide/Advanced User Guide	
Moisture and Density	Pending technical review

LEGACY DOCUMENTATION

The USIO routinely archives electronic copies of documents, reports, and scientific publications produced on behalf of IODP. Documents archived this quarter included all scientific publications produced during the quarter, the FY11 Q4 report, and planning documentation for reporting deliverables.

EDUCATION

USIO education activities are supported by NSF through other Program integration costs (OPIC). The USIO is responsible for developing and disseminating expedition-specific and thematic education activities and materials for elementary through post-secondary and free choice–learning audiences, promoting diversity programs and partnerships, and supporting legacy resources.

The USIO facilitates education activities through Deep Earth Academy (funded jointly by the USIO and the United States Science Support Program [USSSP]) in cooperation with other U.S. education and outreach groups, conducting teacher education activities; developing, testing, and disseminating educational curriculum that highlights IODP science programs; and implementing live and near-real-time programs that highlight and use the *JOIDES Resolution* as a platform for education. The USIO also conducts diversity outreach initiatives to allow minority students to pursue studies in earth systems sciences or to explore careers in scientific ocean drilling and large-scale science program management.

PROFESSIONAL DEVELOPMENT

2012 School of Rock

Plans continued this quarter for the School of Rock 2012, which will be held on board the *JOIDES Resolution* in Curaçao during the end of the tie-up period (21–25 May 2012) and continue during the transit to Bermuda. School of Rock 2012 participants will be selected from participants in the Ship-to-Shore Science grant project (see “Outside Funding and Sponsorships” for more information.)

Onboard educator program

J. Magnusson, an elementary-level teacher from Washington State, completed her tenure as Expedition 336 Onboard Education Officer this quarter. Expedition 339 Onboard Education Officer H. Pereira, a high school educator from Portugal, was funded by ECORD but received shore-based technical support from the USIO. T. Greely, coordinator of education and outreach programs in the University of South Florida's College of Marine Science, was selected to serve as the Expedition 340 Onboard Education Officer.

Educational outreach events

The USIO provided a workshop for District of Columbia science teachers during a professional development day. The USIO was also represented at the 2011 California Science Education Conference, the Science Teachers' Association of New York Annual Conference, the Pennsylvania Science Teachers Association Annual Convention, and the National Science Teachers Association Area Conference in Hartford, Connecticut.

EXPEDITION-BASED LEARNING ACTIVITIES AND MATERIALS

The USIO links school and public audiences to activities on board the *JOIDES Resolution* via advanced web technologies, the *JOIDES Resolution* website, video broadcasting, and/or podcasting. The USIO also produces new expedition-specific and thematic video and learning materials based on legacy material and science and life at sea during USIO expeditions.

JOIDES Resolution website and social networking

The joidesresolution.org website promotes each expedition with expedition pages, blogs, videos, images, and more, and serves as the hub for Program social networking on Facebook, Twitter, and YouTube sites. During this quarter, the site promoted Expeditions 336 and 339.

Work continued this quarter on a substantial website "refresh" of joidesresolution.org, including major revisions and improvements to the expeditions and multimedia pages and significant changes to the home page and the overall presentation of the website.

USIO educational website statistics

USIO educational website*	FY12 Q1 page views	FY12 Q1 site visits
www.joidesresolution.org	75,009	20,793
www.oceanleadership.org/education/deep-earth-academy	14,209	9,500
Total	**89,218**	**30,293**

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

Videos and video broadcasts

More than 70 ship-to-shore video broadcasts were conducted this quarter to audiences including high schools, middle schools, science editors, and museums in places from Canberra, Australia, to Portugal, Spain, Canada, and Japan—in addition to many places in the United States.

Educational materials development and distribution

Materials developed this quarter included a printed version of the *Tales of the Resolution: Arctic Rainforests* and four new videos with subjects including the School of Rock, scientific observatories, studying microbiology, and what it's like to be a scientist. The videos are available on Ocean Leadership's YouTube channel (http://www.youtube.com/user/OceanLeadership).

Materials were distributed this quarter at conferences and outreach activities and in response to requests received through the Deep Earth Academy website. In addition to professional development conferences (see "Educational outreach events"), the USIO also provided materials for several port calls, the American Geophysical Union (AGU) Fall Meeting, and the "Getting to the Core: the *JOIDES Resolution*" museum exhibit (see "Strategic Partnerships" below for more information). In response to 443 requests, 14,800 items were distributed to 46 states and 6 countries.

SCIENTISTS AS EDUCATORS

The USIO provides regular opportunities for scientists to participate in educational programming. During this quarter, A. Malinverno (LDEO) gave a keynote lecture at the Virginia Association of Science Teachers Annual Conference in November 2011.

STRATEGIC PARTNERSHIPS

The North Museum

The "Getting to the Core: the *JOIDES Resolution*" exhibit featuring scientific ocean drilling was transferred from the Texas Maritime Museum in Rockport, Texas, to The North Museum in Lancaster, Pennsylvania, where it opened on 15 October 2011. The exhibit features real sediment cores, drilling artifacts, video, activities for children, and a montage of more than 50 spectacular photos and works of art created on board that tell the story of the expedition. The exhibit also included a LEGO model of the *JOIDES Resolution*, posters of previous J/aRt winners, and a "guide-by-cell" phone tour with recorded messages about parts of the exhibit that could be accessed from anywhere in the world. The exhibit was well received and attended. Plans were made to send the exhibit on to the Brazos Valley Museum in College Station, Texas, in January 2012.

Center for Dark Energy Biosphere Investigations

The USIO continued to partner with the Center for Dark Energy Biosphere Investigations (C-DEBI) to produce microbiology-related materials and projects, collaborating with Expedition 336: Mid-Atlantic Ridge Microbiology scientists on another edition of the Adopt-a-Microbe project (http://aam.darkenergybiosphere.org/) and "Classroom Connections" (http://www.darkenergybiosphere.org/classroomconnection/), a website targeted toward students with special needs.

Ongoing work with C-DEBI includes collaborating on postexpedition materials, a poster and printed Adopt-a-Microbe activities, and preparation for an upcoming Juan de Fuca Ridge post–Expedition 327 cruise scheduled for summer 2012.

OUTSIDE FUNDING AND SPONSORSHIPS

This section describes grant proposal submissions, awarded grants, and subsequent grant-supported activities that complement IODP-USIO science and education activities.

New grants

NSF planning grant

A grant titled "Planning Grant to Bring Cutting Edge Scientific Ocean Drilling Research on Past Climate Change into Minority-Serving Institution Geoscience Classrooms" was awarded during the first quarter through NSF's Opportunities for Enhancing Diversity in the Geosciences (OEDG) program. This $40,000 grant, in collaboration with the American Meteorological Society, will support participation of faculty from minority-serving institutions in a short School of Rock workshop with the goal of writing a full-scale implementation grant.

Activities related to existing grants

C-DEBI grant

The USIO partnered with C-DEBI during FY11 on the education and outreach components of the R/V *Atlantis* Expedition AT18-07, which collected samples and data from subseafloor observatories (CORKS) installed during IODP Expedition 327: Juan de Fuca Ridge-Flank Hydrogeology. During this quarter, funds from the C-DEBI grant also supported travel for several Expedition AT18-07 participants to present a poster at the AGU Fall Meeting and helped to support the "Getting to the Core: the JOIDES Resolution" museum exhibit (see "Strategic Partnerships" for more information).

Ship-to-Shore Science grant

Funding was received for the Ship-to-Shore Science grant—a planning grant from NSF under its Informal Science division. This 2-year, $250,000 grant will support bringing together a large group of collaborators around the topic of creating new and improved science tools to connect

the work of the *JOIDES Resolution* to informal audiences. Planning began this quarter for assembling advisors, an advisory group, and an initial large meeting to be held in February 2012.

DIVERSITY SUPPORT INITIATIVES

IODP-USIO Diversity Internship

The widely published call for applications for the second IODP-USIO Diversity Internship resulted in numerous inquiries and ultimately in five applications. However, the applicants either were not eligible, submitted incomplete applications, or did not have the required skill set. Consequently, the Spring 2012 internship was canceled. Summer internship projects with a science or engineering focus are currently in development.

Minorities in Scientific Ocean Drilling Fellowship

A call for applications for the first Minorities in Scientific Ocean Drilling Fellowship was widely published during this quarter via AGU's *Eos* newsletter, the Geological Society of America's *GSA Today* journal, internal and external listserves, and several websites that advertise fellowship opportunities, including the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS).

R. Caballero-Gill, a Ph.D. student from Brown University, was selected as the Spring/Summer 2012 Minorities in Scientific Ocean Drilling Fellow. Using data from DSDP Leg 90 (Site 594) and ODP Leg 181 (Site 1125), Caballero-Gill will work on a fellowship research project titled "Investigating a Potential Mechanism for Sustained Pliocene Warmth Using Micropaleontology and Alkenone Paleothermometry" to answer critical questions in Pliocene climate research.

Diversity Outreach

A U.S. IODP booth was organized for the first time at the 2011 SACNAS National Conference: Empowering Innovation and Synergy through Diversity held 27–30 October 2011 in San Jose, California. SACNAS is a national nonprofit organization of individuals and organizations dedicated to fostering the success of Hispanic/Chicano and Native American scientists—from college students to professionals—to attain advanced degrees, careers, and positions of leadership. An estimated 3,700 persons attended, making this the largest conference in SACNAS history. Approximately 58%–60% of the participants were undergraduate and graduate students. The booth featured IODP science as well as educational and career opportunities in IODP, particularly for university and college students.

LEGACY DOCUMENTATION

The USIO routinely archives electronic copies of documents, reports, and materials produced on behalf of IODP.

Legacy digital library

Legacy preservation activities include storing electronic copies of relevant educational products and materials produced by the USIO each quarter in a dedicated CMS. Products and materials archived this quarter include the new printed edition of *Tales of the Resolution: Arctic Rainforests,* USIO diversity initiative announcements, images, and the newly developed Minorities in Scientific Ocean Drilling Fellowship Policies and Procedures booklet.

OTHER PROJECTS AND ACTIVITIES

J/aRt 2012 contest

Nearly 100 entries were received this quarter for the J/aRt 2012 contest, titled "Art Under Pressure." Ten winning 3-D styrofoam sculptures were sent to the *JOIDES Resolution* to be lowered to the seafloor during Expedition 340T.

OUTREACH

USIO Outreach activities are designed to build an easily accessible foundation of knowledge about IODP, to raise the visibility of the connection between the emerging scientific knowledge and its positive contribution to society worldwide, and to encourage interest in the Program. To accomplish these goals, the USIO targets informational outreach to the general public, science and general-interest media, legislators, scientists, and engineers from within the IODP community and beyond, and decision makers at large national concerns.

COMMUNICATIONS ACTIVITIES: MEDIA AND PUBLIC OUTREACH

Port call outreach

Multiple public outreach events were conducted during the 17–21 November 2011 port call in Ponta Delgada, Azores (Portugal). Nearly 300 local students, teachers, scientists, reporters, and local dignitaries (including the Regional Secretary for Science and Technology) toured the *JOIDES Resolution* during the port call.

Global outreach activities

The USIO worked closely with outreach colleagues in Europe and Japan to prepare for the AGU 2011 Fall Meeting and the *JOIDES Resolution*'s January 2012 port call in Lisbon, Portugal.

IODP representation at meetings/conferences

Geological Society of America Annual Meeting

An IODP booth was included at the Exhibit Hall of the GSA Annual Meeting held 9–12 October 2011 in Minneapolis, Minnesota. The booth advertised upcoming expeditions and featured the most recent DVD from Deep Earth Academy.

American Geophysical Union Fall Meeting

The IODP booth at the AGU Fall Meeting held 5–9 December 2011 in San Francisco, California, featured a multimedia video loop highlighting images and video footage of 2011 expedition operations on board the *JOIDES Resolution*.

Public relations materials

Communications tools

Both the Fall and Winter issues of the *Core Discoveries* newsletter were published during this quarter (http://www.oceanleadership.org/programs-and-partnerships/scientific-ocean-drilling/core-discoveries-newsletter/).

In mid-November 2011, USIO communications staff launched an "IODP Science News" Twitter account with the handle @SeafloorSci. Augmenting the efforts of the education-focused @TheJR account, this feed is specifically designed to share news highlights targeted primarily to the geoscience media and blogging community. The account had nearly 80 followers as of the end of the quarter, with more joining weekly.

Program-related publications

Articles authored by USIO staff

Program-related 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).

- **Herrmann, S.,** Weller, A.F., Henderiks, J., and Thierstein, H.R., 2011. Global coccolith size variability in Holocene deep-sea sediments. *Mar. Micropaleontol.,* 82:1–12. doi:10.1016/j.marmicro.2011.09.006
- Pierce, E.L., **Williams, T.,** van de Flierdt, T., Hemming, S.R., Goldstein, S.L., and Brachfeld, S.A., 2011. Characterizing the sediment provenance of East Antarctica's weak underbelly: the Aurora and Wilkes sub-glacial basins. *Paleoceanography,* 26(4):PA4217. doi:10.1029/2011PA002127

News articles, news programs, media citations, or public commentary

The following citations comprise examples of news articles, news programs, media citations, or public commentary related to USIO expeditions and/or science. 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.

- Biba, E., 2011. Observatory safely studies deep-sea life. *Wired,* 29 November 2011. http://www.wired.com/magazine/2011/11/st_cork/
- Firmino, T., 2011. Furando o fundo do mar, atrás da corrente que vem do Mediterrâneo. *Público*, 21 November 2011, 8:P2. http://www.lneg.pt/download/4765/Furandoofundodomar_Publico.pdf
- Musgrave, R., 2011. Austria to take part in "breakthrough" deep sea expedition. *Austrian Independent,* 16 November 2011. http://austrianindependent.com/news/General_News/2011-11-16/9498/Austria_to_take_part_in_
- Nóbrega, T., 2011. Reportagem RTP-Açores: visita navio *Joides Resolution. RTP Açores Television Network,* 20 November 2011. http://www.youtube.com/watch?v=MUVd9qWCOv8
- *Science Daily,* 2011. Drop in carbon dioxide levels led to polar ice sheet, study finds. *Science Daily,* 1 December 2011. http://www.sciencedaily.com/releases/2011/12/111201174225.htm
- *The Timaru Herald,* 2011. Scientists to review seabed data. *Timaru Herald,* 15 November 2011. http://www.stuff.co.nz/timaru-herald/news/5965740/Scientists-to-review-seabed-data
- *Weekly Reader,* 2011–2012. Drilling under the sea. *Weekly Reader ScienceSpin* 2–3, December 2011–January 2012. [online access through subscription only]
- Welsh, K., 2011. From greenhouse to icehouse. *Australas. Sci.,* 30–33. http://www.australasianscience.com.au/article/issue-november-2011/greenhouse-icehouse.html
- Xiang, Z., 2011. International ocean drilling pointing the way on climate change. *Xinhuanet.com,* 15 November 2011. http://news.xinhuanet.com/english2010/sci/2011-11/15/c_131247985.htm

LEGACY DOCUMENTATION

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Legacy digital library

Legacy preservation activities include storing electronic copies of relevant outreach products and publications produced by the USIO each quarter in a dedicated CMS. Products and

publications archived this quarter include media advisories, press releases, port call plans, and outreach materials/documents.

APPENDIX A: FINANCE REPORT

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

APPENDIX B: TRAVEL

Purpose*	Category	Dates	Location	Institution: Personnel
Schlumberger site visit	Subcontractor meeting	3 and 4 October 2011	Houston, Texas	LDEO: G. Iturrino, M. Reagan
IODP Primer: An Introduction to Ocean Drilling Programs	Conference representation	7–12 October 2011	Minneapolis, Minnesota	TAMU: N. Stroncik
International Association of Information Technology Assets Managers (IAITAM) Annual Conference	Conference	11–15 October 2011	Las Vegas, Nevada	TAMU: D. Ponzio
International Conference on Asian Marine Geology (ICAMG) IODP Session	Conference Representation	10–14 October 2011	Goa, India	TAMU: B. Clement
CAPES Meeting re: IODP membership	Membership outreach	16–19 October 2011	Brasilia, Brazil	TAMU: M. Malone
Society of Research Administrators (SRA) Meeting	Conference	21–26 October 2011	Montreal, Canada	TAMRF: B. Neyses, M. Strickland
"An Event Apart" Web Conference	Conference	23–27 October 2011	Washington, DC	TAMU: J. Gracia
Rigaku XRF training course	Training	23–27 October 2011	The Woodlands, Texas	TAMU: S. Herrmann
Recompetition Operating Awards NSF/Facility	Meeting	2–4 November 2011	Washington, DC	TAMU: B. Clement
Scientific ocean drilling subcommittee meeting	Meeting	26 October 2011	Washington, DC	LDEO: D. Goldberg
2011 Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) National Conference	Education/ Outreach	26–31 October 2011	San Jose, California	Ocean Leadership: M. Morell
EarthCube Meeting	IT Planning	31 October–4 November 2011	Reston, Virginia	Ocean Leadership: D. Fils
IODP Data Management Coordination Group (DMCG) Meeting	IT Planning	7–9 November 2011	Washington, DC	LDEO: D. Quoidbach TAMU: P. Foster, R. Mithal, J. Rosser
Panalpina, UTT, Mainfreight	Vendor visits	9–11 November 2011	Houston, Texas	TAMU: S. Dillard
Offshore Communications 2011	Conference	10 November 2011	Houston, Texas	TAMU: C. Flores
Expedition 317 second postexpedition meeting	Postexpedition Meeting	10–25 November 2011	Oamaru, New Zealand	LDEO: A. Slagle TAMU: P. Blum
FY11 Annual Report preparation and publications meetings	Reporting	13 November–1 December 2011	College Station, Texas	TAMU: G. Lowe

Purpose*	Category	Dates	Location	Institution: Personnel
Expedition 339 Port Call	Port call activities	14–20 November 2011	Ponta Delgada, Azores	Ocean Leadership: D. Divins, L. Peart, S. Saunders TAMU: B. Clement, D. Houpt, B. Julson, R. Mitchell, D. Partain, J. Rosser
Expedition 331 Operations Review Task Force (ORTF) Meeting	SAS	15–17 November 2011	Tokyo, Japan	Ocean Leadership: G. Myers
Virginia Science Teachers Association Conference	Education/ Outreach	17–19 November 2011	Roanoke, Virginia	LDEO: A. Malinverno
Pennsylvania Science Teachers Association Conference	Education/ Outreach	1 December 2011	Hershey, Pennsylvania	Ocean Leadership: S. Cooper
IODP Proposal Evaluation Panel (PEP) Meeting	SAS	1–3 December 2011	San Francisco, California	Ocean Leadership: D. Divins LDEO: A. Malinverno, A. Slagle TAMU: P. Blum, M. Malone
Texas Tech University Geosciences Seminar: New Perspectives on Ocean Drilling and IODP	Conference Representation	2 December 2011	Lubbock, Texas	TAMU: J. Miller
American Geophysical Union (AGU) Fall Meeting	Conference	5–9 December 2011	San Francisco, California	Ocean Leadership: S. Cooper, D. Divins, G. Myers, D. Fils, L. Peart, S. Saunders, M. Wright LDEO: C. Brenner, D. Goldberg, G. Iturrino, A. Malinverno, M. Reagan, A. Slagle TAMU: P. Blum, M. Malone, J. Miller, N. Stroncik
Expedition 327 ORTF Meeting	SAS	12 and 13 December 2011	College Station, Texas	Ocean Leadership: D. Divins, G. Myers LDEO: M. Reagan
Meeting with Ministry of Education	Membership outreach	12–16 December 2011	Brasilia, Brazil	TAMU: B. Clement
Work with contractor on natural gamma ray (NGR) elemental analysis program	Tool development	27 December 2011	Nacogdoches, Texas	TAMU: M. Vasilyev

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

APPENDIX C: USIO QUARTERLY REPORT DISTRIBUTION

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