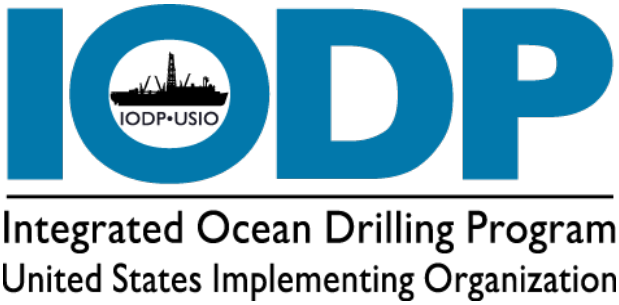
INTEGRATED OCEAN DRILLING PROGRAM

United States Implementing Organization



FY12 Quarterly Report 3

1 April–30 June 2012

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 August 2012

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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

FY12 Q2 IODP-USIO Quarterly Report

The USIO report for the second quarter of FY12 (January–March 2012) was submitted to NSF and the IODP central management office (IODP Management International, Inc. [IODP-MI]) on 15 May 2012 (http://iodp.tamu.edu/publications/AR/FY12/FY12_Q2.pdf).

FY13 IODP-USIO Annual Program Plan to IODP-MI

On 15 May 2012, the USIO submitted for review and evaluation the IODP-USIO FY13 Annual Program Plan to IODP-MI, which outlines requests for science operating costs (SOC) and platform operating costs (POC) including the Costa Rica Seismogenesis Project 2 Expedition; Hess Deep Plutonic Crust Expedition; Southern Alaska Margin Tectonics, Climate, and Sedimentation Expedition; Asian Monsoon Expedition; SCIMPI test deployment; two non-IODP periods totaling 108 days; long–lead time planning costs for expeditions proposed for FY14; and continuing SOC shore-based activities during FY13. This IODP-USIO FY13 Annual Program Plan to IODP-MI budget totaled $3,670,362 in SOC requested from IODP-MI and $68,554,937 requested from NSF for USIO operations.

In June, planning and budget revisions were initiated for a revised version of the IODP-USIO FY13 Annual Program Plan to IODP-MI to be submitted early in the next quarter.

FY13 IODP-USIO Annual Program Plan to NSF

On 15 May 2012, the USIO submitted for review and evaluation the IODP-USIO FY13 Annual Program Plan to NSF, which outlines requests for costs including the Costa Rica Seismogenesis

Project 2 Expedition; Hess Deep Plutonic Crust Expedition; Southern Alaska Margin Tectonics, Climate, and Sedimentation Expedition; Asian Monsoon Expedition; SCIMPI test deployment; two non-IODP periods totaling 108 days; long–lead time planning costs for expeditions proposed for FY14; and USIO efforts for education and outreach and associated management and administrative support. This IODP-USIO FY13 Annual Program Plan to NSF budget totaled $69,349,227. The IODP-USIO FY13 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.

In June, planning and budget revisions were initiated for a revised version of the IODP-USIO FY13 Annual Program Plan to NSF to be submitted early in the next quarter.

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 meetings of standing committees and task forces are available online (http://www.iodp.org/meeting-reports). Other special meetings for which minutes will not be available online are described in this section.

Conference and meeting schedule

Conference/Meeting*	Date	Location
IODP-ICDP Town Hall Meeting (at European Geosciences Union [EGU] General Assembly 2012)	24 April 2012	Vienna, Austria
IODP-MARUM Joint Media Conference (at EGU General Assembly)	25 April 2012	Vienna, Austria
Expedition 330 Operations Review Task Force (OTRF) Meeting	10 and 11 May 2012	Edinburgh, United Kingdom
Data Management Coordination Group (DMCG) Meeting	13–18 May 2012	Edinburgh, United Kingdom
Proposal Evaluation Panel (PEP) Meeting	14 and 15 May 2012	Edinburgh, United Kingdom
Operations Task Force (OTF) Meeting	16 and 17 May 2012	Edinburgh, United Kingdom
Program Member Office (PMO) Meeting	18 June 2012	Arlington, VA
Science Implementation and Policy Committee (SIPCOM) Meeting	19 and 20 June 2012	Washington, DC
IODP-MI Members Meeting	20 June 2012	Arlington, VA
IODP-MI Board of Governors (BoG) Meeting	21 June 2012	Arlington, VA
International Working Group Plus (IWG+) Meeting	21 and 22 June 2012	Arlington, VA

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

CONTRACT SERVICES

Ocean Leadership

Contract activity

Ocean Leadership received the following modifications during the reporting period.

NSF Contract OCE-0352500 with Ocean Leadership

- Modification 54: Changed the Contracting Officer's Technical Representative (COTR) designation; decreased the FY12 Annual Program Plan budget by $4,681,429, from $68,090,604 to $63,409,175, as a result of the approval of an alternative use of the Science Ocean Drilling Vessel; decreased estimated total value of the contract by $4,681,429, from $555,158,279 to $550,476,850.
- Modification 55: Updated indirect costs section; approved a certified claim in the amount of $124,377; provided funding in the amount of $18,000,000 ($17,875,623 + $124,377); and increased the total value of the contract by $124,377, from $550,476,850 to $550,601,227.

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

- Modification 40: Approved a request to carry forward FY11 obligated amount of $401,715; reduced the FY11 Annual Program Plan budget by $287,163, from $4,177,850 to $3,890,687; increased the FY12 budget by $15,000 in order to complete the final phase of the Deep Sea Drilling Project (DSDP)/Ocean Drilling Program (ODP) legacy project; and provided FY12 incremental funding in the amount of $500,000.
- Modification 41: Provided incremental funding in the amount of $1,011,305 to fully fund the FY12 subcontract budget.

Subcontract activity

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

Ocean Leadership Subcontract JSC 4-03 with LDEO

- Modification 55: Provided FY12 incremental funding in the amount of $210,004 (SOC nonoperations [SOC nonops]).
- Modification 56: Reduced the fully funded FY11 Annual Program Plan budget by $345,280 ($299,558 POC and $45,722 SOC nonops) to $7,781,737; deobligated FY11 unobligated SOC nonops funding in the amount of $45,722; reduced Clause B.6 Incremental Funding by $45,722, from $45,743,486 to $45,697,764; provided FY12 incremental funding in the amount of $299,558 (POC); and decreased the total value of the contract by $345,280, from $56,266,790 to $55,921,514.

Ocean Leadership Subcontract JSC 4-02 with TAMRF

- Modification 66: Provided FY12 incremental funding in the amount of $679,918 (SOC nonops).

- Modification 67: Reduced the fully funded FY11 Annual Program Plan budget by $124,926 (SOC nonops) to $58,233,371; deobligated FY11 unobligated SOC nonops funding in the amount of $124,926; reduced Clause B.6. Incremental Funding by $124,926, from $336,219,732 to $336,094,806; and decreased the total value of the contract by $124,926, from $413,334,200 to $413,209,274.
- Modification 68: Provided FY12 incremental funding in the amount of $15,619,163 (POC).
- Modification 69: Decreased the FY 12 Annual Program Plan budget by $4,689,241, from $61,937,491 to $57,248,250, as a result of approval of an alternative use of the Science Ocean Drilling Vessel, and decreased the estimated total value of the contract by $4,689,241, from $413,209,274 to $408,520,033.
- Modification 70: Provided FY12 incremental funding in the amount of $1,017,365 (SOC nonops).

LDEO

Subcontract activity

LDEO issued the following subcontract modifications during the reporting period.

LDEO subcontract with Schlumberger

- Amendment 2: Provided FY12 incremental funding in the amount of $1,800,000.
- Amendment 3: Provided FY12 incremental funding in the amount of $887,416.

LDEO subcontract with Leicester

- Amendment 17: Provided FY12 incremental funding in the amount of $75,000.
- Amendment 18: Provided FY12 incremental funding in the amount of $152,700.

TAMRF

Subcontract activity

TAMRF issued the following subcontract modifications during the reporting period.

TAMRF subcontract with Overseas Drilling Limited

- Amendment 18: Replaced Exhibit C. Statement of Work dated 1 December 2005 with a revised Statement of Work dated 5 December 2011.
- Amendment 19: Increased operational funding by $10,500,000.

Miscellaneous activity

- 27 April 2012: Submitted the Individual Subcontract Reports to Ocean Leadership as required under the POC and SOC Small Business Plans.

PERSONNEL STATUS

Ocean Leadership

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

LDEO

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

TAMU

The following positions were vacated during the quarter:

- Applications Developer III (Timothy Blaisdell): 29 June 2012
- Supervisor of Engineering Services (William Rhinehart): 29 June 2012

The following positions were opened and advertised during the quarter:

- Applications Developer
- Staff Scientist

No positions were filled during the quarter.

USIO WEB SERVICES

The USIO websites are 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 iodp.tamu.edu/scienceops/expeditions.html.

USIO website statistics

USIO website	FY12 Q3 page views*	FY12 Q3 site visits*
www.iodp-usio.org	17,824	11,502
iodp.ldeo.columbia.edu	14,610	3,607
iodp.tamu.edu	433,539	71,490
Total	**461,305**	**84,412**

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

Updated FY12 Q2 statistics

USIO website	FY12 Q2 page views*	FY12 Q2 site visits*
www.iodp-usio.org	20,582	13,174
iodp.ldeo.columbia.edu	11,353	2,951
iodp.tamu.edu	533,999	69,143
Total	**563,659**	**93,386**

*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 archive

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 contract modifications and the FY12 Q2 IODP-USIO quarterly reports to NSF and IODP-MI.

Legacy web services

Key data, documents, and publications produced during the Deep Sea Drilling Project (DSDP) and Ocean Drilling Program (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 Ocean Drilling Program (ODP) Science Operator website and the Deep Sea Drilling Project (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	1,330,545	282,294
www.odplegacy.org	8,492	3,348
www.deepseadrilling.org	199,050	47,130
Total	**1,553,922**	**360,469**

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

OTHER PROJECTS AND ACTIVITIES

TAMU Project Portfolio Management program

Work on the DESClogik Reports project began on 4 Apr and continues to make good progress. Plans were made for project management plan development of the User Data Editing Tool to kick off during the fourth quarter. No new projects were reviewed during the third quarter.

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 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

Expedition		Port (Origin)	Dates[1, 2]	Total Days (Port/ Sea)	Days at Sea (Transit[3]/ Ops)	Co-Chief Scientists	USIO Contacts[4]
Lesser Antilles Volcanism and Landslides[5]	340	San Juan, Puerto Rico	2 March–17 April 2012	45 (3/42)	42 (3/39)	A. Le Friant, O. Ishizuka	TAMU: A. Klaus* LDEO: A. Slagle
Non-IODP [17 April–2 June 2012]							
Newfoundland Sediment Drifts[6]	342	Bermuda	2 June–1 August 2012	60 (2/58)	58 (8/50)	R. Norris P. Wilson	TAMU: P. Blum LDEO: A. Fehr^
Non-IODP [1 August–23 October 2012]							
Costa Rica Seismogenesis Project (CRISP) 2	344	Balboa, Panama	23 October–11 December 2012	49 (2/47)	47 (3/44)	R. Harris A. Sakaguchi	TAMU: K. Petronotis* LDEO: A. Malinverno^
Hess Deep Plutonic Crust	345	Puntarenas, Costa Rica	11 December 2012–12 February 2013	63 (7/56)	56 (11/45)	K. Gillis J. Snow	TAMU: A. Klaus* LDEO: G. Guerin^
Non-IODP [12 February–25 May 2013]							
SCIMPI	341S	Victoria, British Columbia (Canada)	25–29 May 2013	4 (0/4)	4 (2/2)	TBD	TBD
Southern Alaska Margin Tectonics, Climate & Sedimentation[6]	341	Victoria, British Columbia (Canada)	29 May–29 July 2013	61 (3/58)	58 (8/50)	J. Jaeger, S. Gulick	TAMU: A. Klaus* LDEO: H. Evans^
Transit	346T	Victoria, British Columbia (Canada)	29 July–20 August 2013	22 (5/17)			
Asian Monsoon	346	Hakodate, Japan	20 August–28 September 2013	39 (1/38)	38 (2/36)	R. Tada R. Murray	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 http://iodp.tamu.edu/scienceops/expeditions.html.
[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 339: Mediterranean Outflow

Postexpedition activities

The first Expedition 339 postexpedition meeting was held 23–27 April 2012 in College Station, Texas.

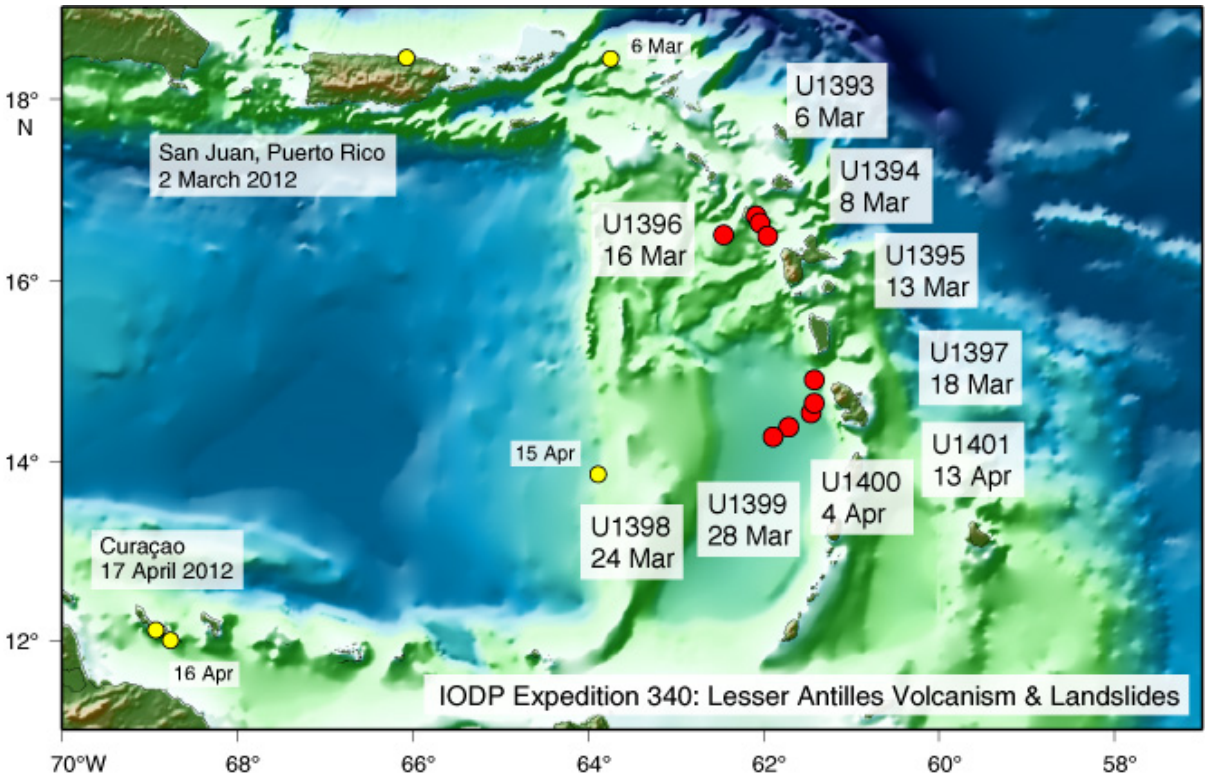
Expedition 340: Lesser Antilles Volcanism and Landslides

Staffing

Because of the schedule change, two scientists withdrew and were replaced. Another scientist withdrew with a medical issue and could not be replaced within the time available.

Expedition 340 Science Party staffing breakdown	
Member country/consortium	**Participants**
USA: United States Science Support Program (USSSP)	8
Japan: Japan Drilling Earth Science Consortium (J-DESC)	8
Europe and Canada: European Consortium for Ocean Research Drilling (ECORD) Science Support and Advisory Committee (ESSAC)	8
Republic of 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)	1
India: Ministry of Earth Science (MoES)	1

Site map



Coring summary

Site	Hole	Latitude	Longitude	Water depth (m)	Cores (n)	Interval cored (m)	Core recovered (m)	Recovery (%)
U1393	U1393A	16°43.1316'N	62°5.0594'W	926.0	7	47.5	5.42	11.4
				Site U1393 totals:	**7**	**47.5**	**5.42**	**11.4**
U1394	U1394A	16°38.4259'N	62°02.2822'W	1114.9	27	244.5	57.37	23.5
	U1394B	16°38.4375'N	62°02.2819'W	1114.2	21	181.4	141.15	77.8
				Site U1394 totals:	**48**	**425.9**	**198.52**	**46.6**
U1395	U1395A	16°29.5988'N	61°57.0858'W	1200.9	28	231.3	144.18	62.3
	U1395B	16°29.5985'N	61°57.0751'W	1200.2	25	203.3	140.21	69.0
				Site U1395 totals:	**53**	**434.6**	**284.39**	**65.4**
U1396	U1396A	16°30.4841'N	62°27.1017'W	787.4	15	134.9	140.51	104.2
	U1396B	16°30.4847'N	62°27.0912'W	787.4	1	9.5	10.00	105.3
	U1396C	16°30.4729'N	62°27.0905'W	786.6	15	139.4	145.92	104.7
				Site U1396 totals:	**31**	**283.8**	**296.43**	**104.5**
U1397	U1397A	14°54.4081'N	61°25.3530W	2482.2	34	261.1	144.20	55.2
	U1397B	14°54.4075'N	61°25.3421'W	2481.4	32	248.7	131.46	52.9
				Site U1397 totals:	**66**	**509.8**	**275.66**	**54.1**
U1398	U1398A	14°16.6984'N	61°53.3422'W	2935.3	30	268.6	115.09	42.8
	U1398B	14°16.6987'N	61°53.3309'W	2935.1	34	263.4	186.75	70.9
				Site U1398 totals:	**64**	**532.0**	**301.84**	**56.7**
U1399	U1399A	14°23.2419'N	61°42.6883'W	2900.8	36	274.7	219.88	80.0
	U1399B	14°23.3639'N	61°42.5380'W	2900.2	26	180.5	183.04	101.4
	U1399C	14°23.2593'N	61°42.6665'W	2900.8	0	0.0	0.00	0.0
				Site U1399 totals:	**62**	**455.2**	**402.92**	**88.5**
U1400	U1400A	14°32.5831'N	61°27.5492'W	2744.4	9	51.3	51.80	101.0
	U1400B	14°32.2023'N	61°27.4065'W	2743.0	28	212.5	215.19	101.3
	U1400C	14°32.1935'N	61°27.4028'W	2743.0	48	421.0	304.49	72.3
				Site U1400 totals:	**85**	**684.8**	**571.48**	**83.5**
U1401	U1401A	14°39.0991'N	61°25.0797'W	2596.7	11	81.5	15.61	19.2
	U1401B	14°39.0237'N	61°25.2273'W	2606.2	3	12.9	12.42	96.3
	U1401C	14°39.1744'N	61°24.9323'W	2578.8	3	10.3	10.44	101.4
	U1401D	14°38.9463'N	61°25.3743'W	2617.9	1	9.2	9.12	99.1
				Site U1401 totals:	**18**	**113.9**	**47.59**	**41.8**
Expedition 340 totals:					**434**	**3,487.5**	**2,384.25**	**68.4**

Logging summary

During the reporting period, Hole U1399C was logged using three tool strings: the triple combination (triple combo)-Magnetic Susceptibility Sonde (MSS) (caliper, electrical resistivity, and magnetic susceptibility), Vertical Seismic Imager (VSI) (borehole seismic), and Formation MicroScanner (FMS)-Sonic (gamma ray, electrical resistivity images, and elastic wave velocity). Due to poor hole conditions, radioactive sources necessary for a density measurement in the triple combo-MSS were not included. Logging data provide a continuous record through the drilled deposits, allowing geophysical characterization of the volcanoclastic debris avalanche deposits that are a key scientific target for this expedition.

Science results

Expedition 340 involved drilling in marine sediment and volcaniclastic material at nine sites located off the islands of Montserrat and Martinique. The overarching aim for this expedition was to reach a better understanding of the constructive and destructive processes occurring along the Lesser Antilles volcanic arc. The primary objectives of this expedition were to

- Drill through the chaotic units (as identified in the seismic data) interpreted as mass wasting deposits and to better understand their composition, origin, and relationship to on-land volcanic flank-collapse events;
- Core as many tephra layers as possible for tephrochronology studies designed to reconstruct the history of the volcanoes of both Montserrat and Martinique and the long-term magmatic evolution of the arc; and
- Retrieve a complete sediment record from each of the sites to study the sedimentation processes occurring along the entire volcanic arc.

Sites U1393–U1396 were located in the northern part of the arc, around Montserrat, and Sites U1397–U1401 were located in the southern part of the arc close to Martinique. Two holes were planned for each of the nine sites, and logging was planned for eight sites.

Sites U1396 and U1397 were chosen to study the magmatic evolution and eruptive history based on tephrochronology of Montserrat and Martinique, respectively. Depth and coring objectives were reached at Site U1396 and partly at Site U1397 (see “Coring summary”).

Sites U1393, U1394, and U1399–U1401 were dedicated to the study of mass wasting deposits and associated erosional processes. Drilling proved to be extremely difficult in these chaotic, heterogenous formations. Although core recovery was highly variable, enough core was recovered to study the processes occurring during the emplacement of such deposits.

Sites U1395 and U1398 were dedicated to the study of distal sedimentation processes associated with the deposition of mass wasting deposits. Despite reaching our depth objectives in at least one hole at both sites, coring objectives below ~120 mbsf were not reached because of poor recovery below advanced piston corer (APC) refusal. Nonetheless, the cored material should be sufficient to conduct the intended scientific studies. Logging was planned at eight of the nine sites and was successfully conducted at Sites U1394, U1395, U1397, and U1399. Because of unfavorable hole conditions, logging was not possible at Sites U1398 and U1400.

Despite the significant difficulties in drilling through the highly heterogeneous sediment, a total of 2,384 m of core was recovered. Postexpedition research will provide crucial information to better constrain the evolution of the Lesser Antilles volcanoes. Correlation of the chaotic deposits identified on seismic reflection profiles with sequences of turbidites or deformed marine sediment will lead to a better understanding of processes related to the instabilities of the Lesser Antilles volcanoes, as well as provide new perspectives for studies of similar volcanic settings.

Expedition 342: Newfoundland Sediment Drifts

Planning

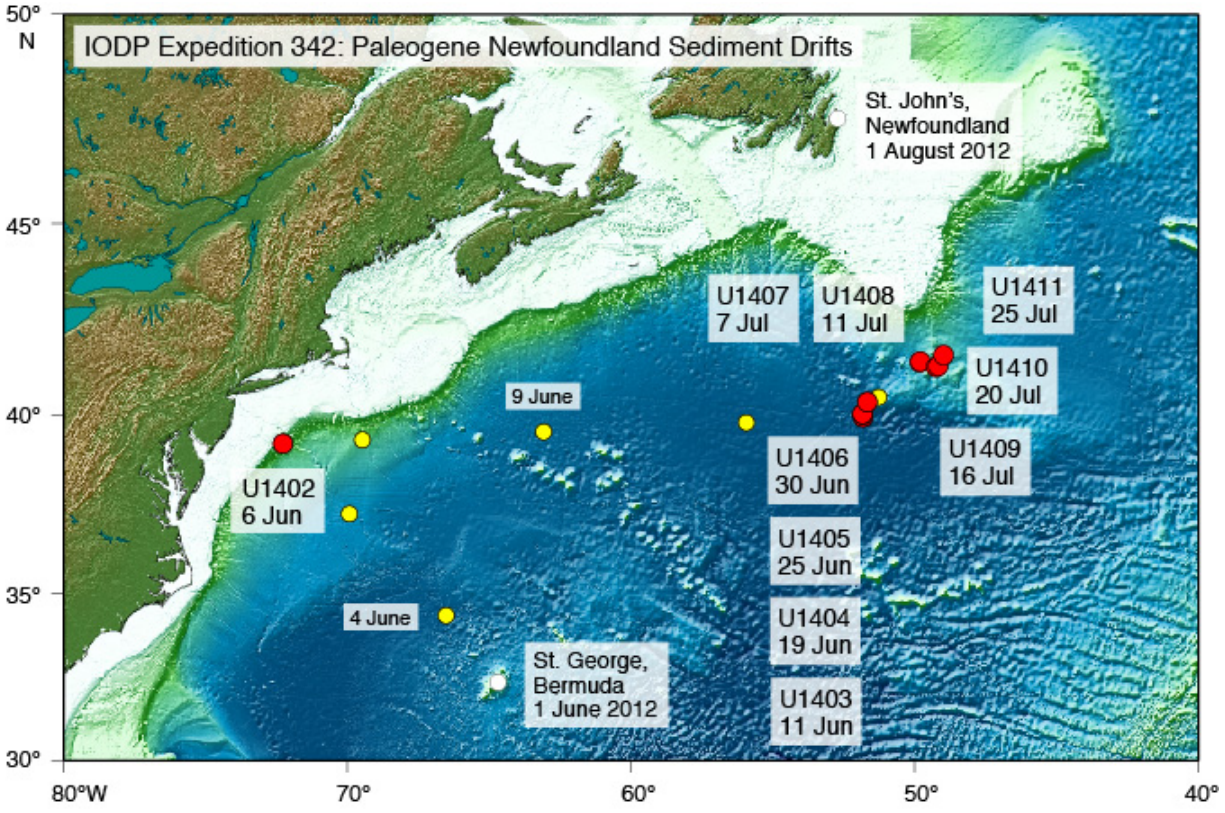
Final scientific and logistical planning efforts were completed, shipments were sent to port, and port call activities were completed with the ship departing Curaçao for Bermuda on time to pick up the Science Party. Final land tests of the Motion-Decoupled Hydraulic Delivery System (MDHDS) were completed on 4 and 5 April. All parties deemed the system ready for sea trials.

Staffing

One of the paleontologists withdrew in May because of challenges in obtaining a visa. An emergency replacement from the original applicant pool was invited and accepted.

Expedition 342 Science Party staffing breakdown	
Member country/consortium	**Participants**
USA: United States Science Support Program (USSSP)	9
Japan: Japan Drilling Earth Science Consortium (J-DESC)	7
Europe and Canada: European Consortium for Ocean Research Drilling (ECORD) Science Support and Advisory Committee (ESSAC)	9
Republic of Korea: Korea Integrated Ocean Drilling Program (K-IODP)	1
People's Republic of China: IODP-China	2
Australia and New Zealand: Australia/New Zealand IODP Consortium (ANZIC)	1
India: Ministry of Earth Science (MoES)	1

Site map



Logging summary

Downhole logging was attempted at Hole U1403B during the reporting period. During deployment through the bottom-hole assembly (BHA), the triple combo tool string (gamma ray, bulk density, neutron porosity, caliper, and electrical resistivity) became irretrievably stuck and the lower portion of the tool string was missing when the BHA was tripped to the surface. A seafloor survey was attempted with the vibration-isolated television (VIT) camera system to determine if the missing section of the tool string could be located on the seafloor, but the coaxial cable connecting the camera to the surface broke due to bottom currents and the signal from the camera and sonar system was lost. The VIT camera, which is critical to IODP re-entry operations, was recovered. Given the powerful bottom current and the expected failure of further attempts, the hole was abandoned.

Inspection of the recovered tool string showed that the upper portion of the gamma tool housing had a diameter close to the 3.8 inch internal diameter of the Kinley Landing Saver Sub in the BHA. The tight fit of the Hostile Environment Natural Gamma Ray Sonde (HNGS) at the Landing Saver Sub caused the tool string to become stuck because the bottom centralizer was also opened just below the bit. The USIO will conduct a systematic review of tool diameters to make sure that none of the other housings have this problem and that all tools can pass through all BHA restrictions.

Expedition 344: Costa Rica Seismogenesis Project (CRISP) 2

Planning

The *Scientific Prospectus* was completed with incorporation of new sites approved by the Environmental Protection and Safety Panel (EPSP) and published on 7 May. A discussion was initiated to incorporate third-party geochemistry analytical tools. The Science Party was solicited for sample and data requests that will be submitted and reviewed during the next quarter. Planning began for chemistry support and determining which Expedition 334 cores should be on board during the expedition.

Staffing

Science staffing was completed this quarter following fulfillment of a special call for a foraminifer specialist.

Clearance and permitting activities

The application to conduct research in the Costa Rica exclusive economic zone (EEZ) was submitted on 24 April after all site locations were finalized.

Environmental assessment

The USIO continued work on developing an Environmental Evaluation (EE) in preparation for VSP work.

Expedition 345: Hess Deep Plutonic Crust

Planning

After an unsuccessful search for alternative ports, the port call length in Puntarenas was extended two days to accommodate limitations associated with sharing the pier with cruise liners. The operational decision tree for re-entry options was finalized and design modifications for existing re-entry hardware options continued. Completion of the design modifications is expected during the next quarter. Planning began for core description support and determining which ODP Leg 147 cores should be on board during the expedition.

Staffing

Science staffing was completed on 11 May.

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

Planning

A site visit to Valdez, Alaska, was scheduled for early next quarter for the ship's Operations Manager to determine if Valdez is suitable for an end port. Documentation was supplied for an alternate site relocated by EPSP, which required preparation of an addendum to the *Scientific Prospectus*.

Environmental assessment

The USIO continued work on developing an Environmental Evaluation (EE) in preparation for VSP work.

Expedition 346: Asian Monsoon

Planning

Discrepancies between sites approved by EPSP in 2007 and an addendum were resolved.

Staffing

A call for applications was issued on 1 June.

MAINTENANCE PERIOD ACTIVITIES

The maintenance period in Curaçao began on 17 April 2012 and ended on 28 May 2012 when the *JOIDES Resolution* began the transit to Bermuda for the start of Expedition 342. The ship arrived in Bermuda on 1 June. The following activities took place during the maintenance period:

- A radiation safety course was given to all hands by a representative of Texas A&M University's Environmental Health and Safety (TAMU EH&S) department.

- Representatives of TAMU EH&S conducted an audit of laboratory spaces on 17 and 18 April. Findings of this audit will be incorporated into laboratory protocols and improvements.
- Shell representatives, TAMU staff, and Overseas Drilling Limited (ODL) personnel held a hazard identification (HAZID) meeting and a Drilling Well on Paper meeting for the upcoming Shell work.
- Shell palynology representative I. Prince conducted a laboratory safety audit with a focus on the facilities and procedures for using hydrofluoric acid.
- New refrigeration units were installed in the core storage reefer.
- Cold-weather enclosure panels were fabricated for the catwalk.
- A RigNet representative changed the satellite control used for ship communication and modified the feed horns for work in the Northern Atlantic.
- MDHDS engineers were on board from 25 May to 8 June and worked on the new tool prior to installation on Expedition 342.
- SERCO personnel serviced microscopes and trained USIO technical staff.
- Additional technical staff sailed on the transit to Bermuda as part of the remobilization effort, testing instruments and software to ensure readiness for Expedition 342.
- Servers and software were upgraded (see "Operation, maintenance, and security" in "Data Management"). Marine Computer Specialists assisted with testing and improvements to the software.
- USIO staff hosted a School of Rock on board the *JOIDES Resolution* (see "2012 Schools of Rock" in "Education").

ANALYTICAL SYSTEMS

Analytical Systems acquisitions and updates

A GigaPanEPIC robotic camera mount was purchased to facilitate panoramic image capture for virtual laboratory tours as well as public relations activities. In addition, a high-definition (HD) video camera was purchased to replace an aging camera on shore—the new camera will be sent to the *JOIDES Resolution* and the HD camera that is currently on board will be rotated to shore use. A set of diffuse color standards was purchased from Labsphere to improve color reflectance data quality. Smaller ovens were purchased for the moisture and density (MAD) determination. These ovens vent to the rear and can be mounted below the benchtop, freeing up needed counter space. The old oven will be rotated for use on shore.

Laboratory working groups

Geology

The Geology Laboratory Working Group (LWG) met during this quarter and discussed primarily the DESClogik Report project. Other topics of discussion included automated image brightening

for the Section-Half Imaging Logger (SHIL), truncated text issues with Golden Software's Strater, the need to store 360-degree images from hard rock cores in the Laboratory Information Management System (LIMS), the feasibility of using digital single-lens reflex (DSLR) cameras instead of SPOT™ cameras on microscopes (longer term benefit of user-friendliness and cheaper cameras), and the lighting in the core laboratory.

Geophysics

The Geophysics LWG discussed the edge effects on the Natural Gamma Ray Logger (NGRL), highlighting the fact that the edge effects are themselves matrix-dependent. Science operations staff volunteered to work on obtaining natural rock standards of known composition to help model the edge effects. Color calibration was discussed and it was stressed that the technician should emphasize proper calibration procedures with the scientists. A discussion of ongoing problems with the pycnometer cell #1 (of 6) highlighted what appeared to be a gas leakage problem—this was traced to an electrical fault and resolved by technical staff during the Curaçao tie-up. In tandem with the Geology LWG, this working group discussed and endorsed automated SHIL image correction.

Geochemistry

Geochemistry LWG discussions focused primarily on future expedition preparation. Expedition 344 geochemists are concerned with the poor precision of the sulfate data on the ion chromatograph (IC) and are bringing a third-party instrument to the ship, the data from which will need to be loaded to LIMS. The USIO is working on the precision issues and has purchased a module for the Thermo-Dionex IC that may help. The LWG also discussed hydrofluoric acid safety for the palynology work to be done during Expedition 344S and the new Agilent CARY 100 spectrophotometer, which performed well on its maiden expedition (Expedition 340) and should provide ease of use and good reproducibility for water constituents. Plans were made for producing a preventive maintenance schedule to be circulated among the chemistry technicians and included in the chemistry laboratory standard operating procedures.

Projects and other activities

Geosciences Laboratory (ODASES)

The TAMU Ocean Drilling and Sustainable Earth Science (ODASES) Geosciences Laboratory hosted three scientists for X-ray fluorescence (XRF) scanning projects during the quarter. In addition, the Geosciences Laboratory hosted one commercial client, who scanned shale cores in collaboration with a scientist from the University of Hawaii. The schedule for use of the XRF accounted for 36 calendar days during the quarter and was active more than one-third of available days. When it is not needed for operational support, the shore-based SHIL continues to see use imaging cores when they are prepared for XRF analysis.

ENGINEERING SUPPORT

Engineering equipment acquisitions and updates

Vendors were selected from responses to the requests for quotes issued last quarter for the winch drum and cable. A purchase order (PO) was issued for the winch drum and work began on pulling together documentation for approvals to issue a PO for the cables. The fourth quarter will focus on the underwater connections, telemetry, and end products.

Projects and other activities

Large diameter pipe-handling infrastructure

USIO, Blohm & Voss (B&V), and Siem representatives reviewed engineering drawings on board the *JOIDES Resolution* during the Curaçao maintenance period in early May. These drawings contained new weight and size specifications for the 350- and 500-ton elevators to account for the center of gravity as well as provide the ability to swing and latch. Based on these new specifications and comments from the Siem's crew members, B&V is designing a new handler because excessive wear occurs on the elevator bearings-guide rollers when using the existing 430-ton IODP elevator. B&V began the final design phase of the elevators for 5, 5-1/2, and 6-5/8 inch drill pipe that will accommodate USIO recommended tool joint lengths, thus allowing additional recuts that could potentially extend the drill pipe's length of service.

Magnetic Susceptibility Sonde rebuild

Development of the deep-reading and high-resolution sensors was completed and two complete Magnetic Susceptibility Sonde (MSS)-B tools were pressure tested, bench tested, and calibrated. Both tools will be shipped to Newfoundland after the conclusion of Expedition 342 and will be available for future IODP expeditions.

Multifunction telemetry module projects

The Multifunction Telemetry Module (MFTM), which transmits third-party tool downhole data back to the surface in real time, was deployed at Site U1402 during the transit at the beginning of Expedition 342. Although operational difficulties were encountered, the MDHDS was successfully released using the MFTM and Electronic Release System (ERS), the temperature/dual pressure (T2P) penetrometer was successfully driven into the formation, and data were monitored uphole and collected for more than one hour while decoupled from the drill string. A full report detailing results and recommendations was submitted to IODP-MI.

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 test well at LDEO, and at-sea deployment.

Project status

Problems with seals between the composite material and nonmagnetic metal field joints were encountered during pressure testing. A newly designed pressure housing was successfully tested to 10 kpsi, and additional housings were ordered with delivery expected in August 2012. Work on the electronics boards and firmware continued. Personnel changes within the LDEO engineering group resulted in a re-evaluation of the timeline for completing this tool.

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, the USIO Systems Integration Contractor, with assistance from the USIO partners.

Project status

Plans were made to hold the second UTP meeting at LDEO on 3 and 4 October 2012. A draft agenda was created this quarter and internal review of the agenda began.

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 344. USIO Curatorial Specialists supervised shipboard core sampling during Expeditions 340 and 342 and reviewed all shipboard and moratorium-related requests in coordination with the other members of the expedition Sample Allocation Committee (SAC).

SAMPLE MATERIALS CURATION SYSTEM

The new sample submission software will be ready for external testing in July.

CORE CURATION

All IODP core sample requests are handled by the GCR, Bremen Core Repository (BCR), 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 3,204 samples that were taken during the quarter. Sample requests that show zero samples taken may represent cores that were viewed by visitors during the quarter, used for educational purposes, or requested for XRF analysis. 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	Number of visitors
22555A, Norris, USA	125	
22443A, Herrmann, USA	50	
1513IODP, John, United Kingdom	299	2
21554, Sexton, United Kingdom	103	
22170G, Stepanova, USA	21	1
22570A, Thomas, USA	0	4
22567A, Raimbourg, France	73	
22533A, Kordesch, United Kingdom	39	2
22547A, John, United Kingdom	0	54
22561A, Puceat, France	89	
22577A, Olszewski, USA	0	140
22572A, Waite, USA	129	
22011D, Pagani, USA	88	
22548B, Sosdian, United Kingdom	15	

Sample request number, name, country	Number of samples taken	Number of visitors
20725H, Badger, United Kingdom	25	
22593A, Grey, United Kingdom	1	
22583A, Naafs, Germany	45	
22585A, Jackson, USA	25	
22587A, Abbott, USA	7	
1415IODP, Drury, United Kingdom	2	
22592A, Cook, United Kingdom	6	
22598A, Broyles, USA	65	
1541IODP, Shackford, USA	101	
22590A, Lisi, USA	6	
22584B, Markovic, Canada	68	1
22584A, Markovic, Canada	75	
1558IODP, Jackson, USA	14	
22600A, Cabarcos, Spain	23	
22596A, Raymo, USA	254	
22603B, Harwood, USA	304	2
1581IODP, Jaeger, USA	8	
22613A, Marsaglia, USA	76	2
22588A, Weinzierl, Germany	14	
22624A, Abbott, USA	3	
22604A, Schmaedicke, Germany	17	
22619A, Etourneau, France	22	
22617A, Thomas, USA	0	15
22621A, Limoges, Canada	71	
1570IODP, Kemp, United Kingdom	98	
22599A, Ravizza, USA	40	1
22595A, Vigier, France	65	
22626A, Kamikuri, Japan	114	
21985C, Usui, Japan	13	
22589A, Hauptvogel, USA	339	
1533IODP, Palmer, United Kingdom	15	
22636A, Thomas, USA	0	10
1352IODP, Hatfield, USA	200	2
21544C, Sexton, United Kingdom	57	1
Totals	**3,204**	**237**

GCR tours/visitors

Type of tour or visitor	Number of Visitors
Scientist visitors	237
Educational tours/demonstrations (6)	79
Public relations tours (4)	26
Totals	**342**

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. This quarter, the GCR hosted 23 participants in a 2012 School of Rock program utilizing a wide variety of IODP cores and shore-based analytical facilities. The GCR also hosted part of the GeoX initiative, a weeklong TAMU program for high-achieving high school juniors and seniors, and played a role in the Sea Aggie Camp Tour, a TAMU outreach program.

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 this quarter included the following projects.

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 65% 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.

OTHER PROJECTS AND ACTIVITIES

USIO personnel traveled to the BCR to help with the Expedition 339 sampling party held 9–15 June in Bremen, and began preparations for the Expedition 340 sampling party to be held at the GCR in August.

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 340 data were added to the LIMS database on shore. These data are currently under moratorium and available only to the scientists who sailed on this expedition. Expeditions 334 and 335 data were placed out-of-moratorium during this quarter.

Log database

The following data from USIO expedition 340 were processed and put online:

- USIO Expedition 340, Holes U1394B, U1395B, and U1397B: standard and image data
- USIO Expedition 340, Hole U1397C: standard, image, and borehole seismic data

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	1,387	USA	702	USA	377
2	United Kingdom	406	Germany	99	United Kingdom	185
3	Germany	315	Unknown	76	China	126
4	Japan	252	Japan	73	Japan	102
5	Canada	244	United Kingdom	60	Taiwan	94
6	China	138	France	26	France	77
7	Slovakia	108	China	24	Germany	74
8	Italy	95	Spain	18	India	63
9	France	90	South Korea	16	Spain	56
10	The Netherlands	76	Australia	13	Brazil	35
	Others	437	Others	86	Others	211
	Total	**3,548**	**Total**	**1,188**	**Total**	**1,420**

Janus database web queries		
Rank	**Query**	**Uploads**
1	Point calculations	989
2	Imaging—photos	885
3	Sample	756
4	Site summaries	559
5	Hole trivia	436
6	Physical properties—GRA	418
7	Chemistry—carbonates	363
8	Chemistry—gas	342
9	Physical properties—MSL	318
10	Chemistry—rockeval	282
11	Core summaries	274
12	Paleo—age models	245
13	Physical properties—color (RSC)	222
14	Requests	209
15	Hole summaries	193
16	Leg summaries	149
17	Physical properties—PWL	145
18	Site summaries—trivia	143
19	Paleo—age profile	138
20	Images—prime data	115
	Others	1,789
	Janus database total	**8,970**

LIMS database web queries	
Query type	**Views**
LIMS Reports	2,285
Web Tabular Reports	313
LIMS database total	**2,598**

Data requests submitted to the TAMU Data Librarian	
Requests	**Total**
Image requests	9
Chemistry: interstitial water	2
How to access, etc.	2
MST data (multiple analysis)	1
GRA	1
SRA	1
Gas	1
RSC	1
Depth	1
Hole locations	1
Logging	1
Hole summaries	1
Total	**22**

Countries submitting data requests to the TAMU Data Librarian	
Country	**Total**
USA	13
Iceland	2
United Kingdom	2
Australia	1
Canada	1
Germany	1
Italy	1
Unknown	1
Total	**22**

Other USIO web statistics*			
	Janus database	LIMS database	Log database
Database query hits:			
Entire site (successful)	18,296	5,217	9,702
Average per day	201	57	10.62
Visitor sessions:			
Total number of visitor sessions	3,548	1,215	1,420
Average per day	37	13	15.60
Average length of visit	00:12:03	00:13:15	00:6:53
International visitor sessions	60.77%	35.97%	73.45%
Visitor sessions of unknown origin	0.14%	6.25%	0.00%
Visitor sessions from United States	39.09%	57.78%	26.55%
Visitors:			
Unique visitors	1,929	726	750
Visitors who only visited once	1,405	597	665
Visitors who visited more than once	524	129	85
Average visits per visitor	1.84	1.67	1.89

OPERATION, MAINTENANCE, AND SECURITY

TAMU completed its required annual Information Security Awareness, Assessment, and Compliance System (ISAAC) self-assessment and implemented important software upgrades on board the *JOIDES Resolution*, at the Regional Test and Integration Facility (RTIF), and in USIO offices on shore. Upgrades included Oracle 11G; Windows Server, and the SQL Server 2008 R2; Java 7; and Apache Tomcat 7. Google Apps for Education were added to the TAMU IT services portfolio and scheduled for release on 13 July, with the domain name scientific-ocean-drilling.org and the main landing page at http://www.scientific-ocean-drilling.org.

JOIDES Resolution Logging Office upgrades were also made during the Curaçao tie-up period, including replacement of Logging Office computers, replacement of the redundant array of independent disks (RAID) storage unit with a new Network Attached Storage (NAS) device, and general maintenance on all equipment. Images of all systems were made for installation on the shore-based testbed.

SOFTWARE DEVELOPMENT

Routine software maintenance was conducted this quarter on SampleMaster, LIMS Reports, LIMS Overview, 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 301–340, including ESO Expeditions 302, 310, and 313 and CDEX Expeditions 314, 319, and 322.

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

- Harris, R., Sakaguchi, A., and Petronotis, K., 2012. Costa Rica Seismogenesis Project, Program A Stage 2 (CRISP-A2): sampling and quantifying lithologic inputs and fluid inputs and outputs of the seismogenic zone. *IODP Sci. Prosp.,* 344. doi:10.2204/iodp.sp.344.2012

Preliminary Reports

- Expedition 340T Scientists, 2012. Atlantis Massif Oceanic Core Complex: velocity, porosity, and impedance contrasts within the domal core of Atlantis Massif: faults and hydration of lithosphere during core complex evolution. *IODP Prel. Rept.,* 340T. doi:10.2204/iodp.pr.340T.2012
- Expedition 340 Scientists, 2012. Lesser Antilles volcanism and landslides: implications for hazard assessment and long-term magmatic evolution of the arc. *IODP Prel. Rept.,* 340. doi:10.2204/iodp.pr.340.2012

IODP Proceedings

- Vannucchi, P., Ujiie, K., Stroncik, N., and the Expedition 334 Scientists, 2011. *Proc. IODP,* 334: Tokyo (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.334.2012
- Teagle, D.A.H., Ildefonse, B., Blum, P., and the Expedition 335 Scientists, 2012. *Proc. IODP,* 335: Tokyo (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.335.2012

Data Reports

- Flemings, P.B., John, C., and Behrmann, J., 2012. Expedition 308 synthesis: overpressure, consolidation, and slope stability on the continental slope of the Gulf of Mexico. *In* Flemings, P.B., Behrmann, J.H., John, C.M., and the Expedition 308 Scientists, *Proc. IODP,* 308: College Station TX (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.308.215.2012

- Kamikuri, S., Moore, T.C., Ogane, K., Suzuki, N., Pälike, H., and Nishi, H., 2012. Data report: early to middle Eocene radiolarian biostratigraphy, IODP Expedition 320 Site U1331, eastern equatorial Pacific. *In* Pälike, H., Lyle, M., Nishi, H., Raffi, I., Gamage, K., Klaus, A., and the Expedition 320/321 Scientists, *Proc. IODP,* 320/321: Tokyo (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.320321.202.2012

CDEX publications

Scientific Prospectus

- Dugan, B., Kanagawa, K., Moore, G., Strasser, M., Eguchi, N., Toczko, S., and Maeda, L., 2012. NanTroSEIZE Stage 3: NanTroSEIZE plate boundary deep riser 2. *IODP Sci. Prosp.,* 338. doi:10.2204/iodp.sp.338.2012

IODP Proceedings

- Henry, P., Kanamatsu, T., Moe, K., and the Expedition 333 Scientists, 2012. *Proc. IODP,* 333: Tokyo (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.333.2012

Data Reports

- Milliken, K.L., Comer, E.E., and Marsaglia, K.M., 2012. Data report: modal sand composition at Sites C0004, C0006, C0007, and C0008, IODP Expedition 316, Nankai accretionary prism. *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.314315316.221.2012

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).

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 (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 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	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
313	4 August 2012			
314/315/316	4 October 2010		27	17
317	4 September 2012			
318	2 March 2013			
319	30 April 2012			
320/321	30 June 2012	12	12	
322	10 June 2012	10	10	
323	10 August 2012	1	1	
324	4 July 2012	7	7	
325	16 March 2013			

Synthesis papers

Expedition	Submission deadline (26 months postmoratorium)	Deadline extensions approved in FY12 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*	
313	4 February 2013			
314/315/316	5 April 2011		1*	
317	4 March 2013			
318	2 September 2013			
319	30 October 2012			
320/321	30 December 2012			
322	10 December 2012			

Expedition	Submission deadline (26 months postmoratorium)	Deadline extensions approved in FY12 Q3	Overall extension status	
			Number approved	Number fulfilled
323	10 February 2013			
324	4 January 2013			
325	16 September 2013			

*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

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

Publications website	FY12 Q3 page views	FY12 Q3 site visits
www.iodp.org/scientific-publications	320,863	56,696

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			
		April 2012	May 2012	June 2012	FY12 Q3 total
IODP	10.2204	5,403	6,323	6,573	**18,299**
ODP/DSDP	10.2973	12,763	6,075	5,888	**24,726**

PUBLICATIONS SUPPORT

The USIO provided Publications Specialist services during USIO Expeditions 340 and 342 and hosted the postexpedition meeting for USIO Expedition 339.

TECHNICAL DOCUMENTATION

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

Technical documentation	FY12 Q3 status
Quick start guides	
Section-Half Imaging Logger (SHIL)	Under technical review
Section-Half Multisensor Logger	Under technical review
Whole-Round Multisensor Logger	Under technical review
Discrete Analyzer	Under final review
Ion Chromatograph	Under final review
User guides	
Moisture and Density (MAD)	Under technical review
Natural Gamma Radiation Logger	Under technical review
SHIL	Under technical review
Source Rock Analyzer	Under technical review
Advanced User Guides	
MAD	Under technical review
Source Rock Analyzer	Under 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 FY12 Q2 report, the FY13 Annual Program Plans submitted to NSF and IODP-MI on 15 May 2012, and planning documentation for other 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 Schools of Rock

The third quarter featured two School of Rock programs. The first 2012 School of Rock, held on the *JOIDES Resolution* while in port in Curaçao and continuing through a short transit to Bermuda, took place 23 May–2 June. This program was part of the Ship-to-Shore Science project funded by an NSF Informal Science Pathways grant. Eleven participants were selected from funded pilot projects and several other key partner organizations, resulting in participation of mainly informal science educators. Participants in this School of Rock were introduced to many geology and ocean drilling topics and given time to plan and work on projects with Ship-to-Shore Science project staff and evaluators. The instructional team included J. Snow (University of Houston), J. Lewis (Indiana University of Pennsylvania [IUP] and U.S. Advisory Committee [USAC],), and L. Sautter (College of Charleston).

The second 2012 School of Rock was a planning project supported largely by NSF's Opportunities for Enhancing Diversity in the Geosciences (OEDG) program, and supplemented by the USIO. A collaboration between the USIO and the American Meteorological Society (AMS), James Madison University (JMU), and Los Angeles Valley College (LAVC), this School of Rock took place 3–7 June at the GCR in College Station, Texas. Participants included faculty members of minority-serving institutions, primarily 2-year colleges. Instructors included K. St. John (JMU), J. Hamms (LAVC), and L. Krissek (Ohio State). Participants were guided through several laboratory exercises from St. John et al.'s newly published book *Reconstructing Earth's Climate History,* and provided feedback for a Track II OEDG proposal.

Onboard educator program

On-Board Educators this quarter included T. Greely, coordinator of Education and Outreach programs at the University of South Florida (USF) College of Marine Science, and C. Scully (Scripps Institute of Oceanography). Greely served as the Expedition 340 Onboard Education Officer, held 35 video broadcasts to both U.S. and international audiences, and worked closely with USF teacher programs. Scully is currently participating in Expedition 342 and has held more than a dozen video broadcasts to date.

Videographer D. Brinkhaus is also sailing on Expedition 342 and working with the shipboard scientists and staff, as well as Program staff on shore. Brinkhaus is tasked with producing weekly video updates for YouTube, a 20-minute documentary at the expedition's end, and a number of smaller pieces to fulfill education and outreach needs. Expedition 342 videos on YouTube are already receiving large numbers of hits.

Educational outreach events

USIO staff participated in the USA Science and Engineering Festival—an event that drew more than 200,000 people (families and school children) to the Washington, DC, convention center. The USIO booth, manned by USIO program scientists and technicians, focused on a brand new interactive drilling exhibit for children and interpretation of model cores.

Another highlight of the quarter was the USIO's first-time participation in the Intel International Science and Engineering Fair (ISEF) in Pittsburgh, PA. USIO staff judged high school science fair projects from around the world and awarded $5,000 in prizes to the top two ocean-related projects. The USIO booth at ISEF hosted more than 4,000 local students, and USIO staff conducted a symposium on ocean drilling and ways to get involved as students and educators.

USIO staff also participated in the June 24–28 National Marine Educators Association's (NMEA) annual meeting in Anchorage, Alaska, presenting two well-attended sessions. One session showcased a ship-to-shore broadcast with Expedition 342 and the other focused on the USIO's art and science integration projects, including the J/aRt contest.

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.

Deep Earth Academy website

The Deep Earth Academy website (deepearthacademy.org) continued to serve as the hub for information on professional development, classroom activities, and materials ordering. New web pages were added this quarter for the 2012 Schools of Rock.

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 340 and 342. Staff also completed the overhaul of the site's home page and internal navigation site maps.

USIO educational website statistics

USIO educational website*	FY12 Q3 page views	FY12 Q3 site visits
www.joidesresolution.org	55,305	18,014
www.oceanleadership.org/education/deep-earth-academy	16,963	11,981
Total	**72,268**	**29,995**

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

Videos and video broadcasts

Each Onboard Education Officer connects with numerous classrooms, museums, professional development programs, and special events to provide live ship-to-shore video broadcasts lasting 30–45 minutes each. This quarter featured Expedition 340, which held 35 events, and Expedition 342, which is still in progress. Live events during these expeditions will reach more than 2,000 individuals.

Educational materials development and distribution

Materials developed this quarter included five new videos about Expedition 342, a new portable drilling interactive exhibit, and a new bookmark to accompany the exhibit.

Materials were distributed this quarter at conferences and outreach activities and in response to requests received through the Deep Earth Academy website. Approximately 27,000 items were distributed this quarter, filling 638 materials requests to all 50 U.S. states and 14 countries, including Scotland, Russia, Canada, Australia, France, Belgium, Portugal, and Sri Lanka.

SCIENTISTS AS EDUCATORS

The USIO provides regular opportunities for scientists to participate in educational programming. During this quarter, scientists J. Snow, J. Lewis, L. Sautter, K. St. John, J. Hamms, and L. Krissek served as instructors in the 2012 Schools of Rock (see "Professional development" for more information).

B. Orcutt (Bigolow Labs) began working on a collaborative project with the USIO to edit and adapt the Adopt-a-Microbe expedition-based online project into a standalone curriculum module for educators and families.

On 25 April 2012, D. Stow (Expedition 339 Co-Chief Scientist) gave a presentation called "IODP Expedition 339: initial results from the world's premier contourite laboratory" at a special seminar at TAMU's Department of Oceanography.

STRATEGIC PARTNERSHIPS

Brazos Valley Museum of Natural History

The "Getting to the Core: the *JOIDES Resolution*" exhibit featuring scientific ocean drilling was on display at the Brazos Valley Museum of Natural History in Bryan, Texas, through 28 April 2012. The exhibit featured large-scale banner graphics, real sediment cores, drilling artifacts, video, a 3D model of the ship, 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 components of this exhibit were returned to the USIO and are in storage at Ocean Leadership.

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. During this quarter, USIO staff began working on supporting materials to accompany the collaborative "How Science Works" unit, including complementary materials that will repurpose the online Adopt-a-Microbe program into a stand-alone unit that will be available as a resource for educators.

American Meteorological Society

The USIO partnered with the American Meteorological Society (AMS) on the OEDG grant (see "Activities related to existing grants" below) and are planning together for the next phase of that project.

OUTSIDE FUNDING AND SPONSORSHIPS

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

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 sub-seafloor observatories (CORKS) installed during IODP Expedition 327: Juan de Fuca Ridge-Flank Hydrogeology. A continuation awarded last quarter will support USIO-managed education and outreach programs during the second phase of this project, which will include an expedition to the same sites on the R/V *Thompson* 29 July–11 August. Educators were recruited this quarter and planning was initiated for this summer's expedition.

Ship-to-Shore Science grant

Personnel from the selected pilot projects participated in the School of Rock held on the *JOIDES Resolution* in Curaçao and on the transit to Bermuda (see "2012 Schools of Rock"). This experience was a crucial component for their project kick-offs and development. All of the pilot projects are moving forward according to project-specific timelines.

Opportunities for Enhancing Diversity in the Geosciences grant

The "Planning Grant to Bring Cutting Edge Scientific Ocean Drilling Research on Past Climate Change into Minority-Serving Institution Geoscience Classrooms," funded by NSF's OEDG program in collaboration with the AMS, supported a weeklong School of Rock for faculty from minority-serving institutions (see "2012 Schools of Rock"). Planning began for using feedback from the School of Rock participants to write a full-scale implementation grant.

DIVERSITY SUPPORT INITIATIVES

IODP-USIO Diversity Internship

H. Tesoro was selected in June to be the second IODP-USIO Diversity Intern. Tesoro is originally from Oakland, CA, and holds a Bachelor's Degree in Environmental Science from Mills College. She will work for 12 weeks with the U.S. IODP Communications group at Ocean Leadership in Washington, DC, to develop and implement initiatives that effectively communicate science news and information related to IODP expeditions, publications, and other activities.

LDEO Summer Internship

The USIO is also cosponsoring two undergraduate students who will participate in LDEO's Summer Internship program, working on 10-week research projects that use scientific ocean drilling data and/or cores.

C. Yeh, an undergraduate from Hofstra University's Environmental Resources program, is working with Drs. D. Abbott and T. Williams on a research project titled "Can we date and prove the Bowers impact layer and use it as a rare event to aid in climate studies?" As part of this project, Yeh will help characterize and date the spherule-bearing layer in five Eltanin cores collected from the Ross Sea, Antarctica, and Deep Sea Drilling Project Leg 28 Sites 270, 273, and 274.

A. Duchesne from Dartmouth College's Environmental Earth Sciences program is working with Drs. T. Williams and S. Hemming on a research project titled "Can we collect K/Ar evidence of ice stream behavior at Prydz Bay Antarctica?" Duchesne will use the K/Ar system on ODP sediment cores collected from the Prydz Bay sector in Antarctica (ODP Leg 188, Site 1165) to find the provenance of glacially eroded material in the cores, and assess the relative importance of physical versus chemical weathering.

Minorities in Scientific Ocean Drilling Fellowship

In June, the USIO released the second Minorities in Scientific Ocean Drilling Fellowship payment of $10,000 to R. Caballero-Gill, a Ph.D. student in the Geological Sciences program at Brown University, Rhode Island. Under the guidance of Dr. T. Herbert, Caballero-Gill is working on a research project titled "Investigating a potential mechanism for sustained Pliocene warmth using micropaleontology and alkenone paleothermometry" to answer critical questions in Pliocene climate research.

LEGACY DOCUMENTATION

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

Legacy digital archive

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 Expedition 342 videos and a new bookmark designed to accompany the portable drilling interactive exhibit.

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 the national level.

COMMUNICATIONS TO U.S. LEGISLATIVE AUDIENCES

USIO representatives attended the Coalition for National Science Funding (CNSF) reception on Capitol Hill on 15 May. Federal legislative members and staff as well as representatives from other stakeholder organizations attend this annual event to learn about institutions and large-scale scientific projects that receive major funding from NSF.

COMMUNICATIONS ACTIVITIES: MEDIA AND PUBLIC OUTREACH

IODP representation at meetings/conferences

USIO representatives attended the late April European Geosciences Union (EGU) 2012 General Assembly in Vienna, Austria, helping to staff the display booth organized by IODP-MI and attending press briefings, scientific sessions, and an IODP Town Hall meeting that was jointly organized with the International Continental Scientific Drilling Program (ICDP).

Public relations materials

USIO media advisories and news releases

During this quarter, the USIO either developed and published or played a role in developing the following press release:

- Today's climate more sensitive to carbon dioxide than at any point in past 12 million years (6 June 2012). http://www.oceanleadership.org/2012/todays-climate-more-sensitive-to-carbon-dioxide/ [Press release was reposted by *Science Daily* (http://www.sciencedaily.com/releases/2012/06/120606164930.htm), *Phys.Org* (http://phys.org/news/2012-06-today-climate-sensitive-carbon-dioxide.html), *Environmental Protection* (http://eponline.com/articles/2012/06/08/today-climate-more-sensitive-to-carbon-dioxide-than-in-past-12-million-years.aspx), *Nano Patents and*

Innovations (http://nanopatentsandinnovations.blogspot.com/2012/06/todays-climate-more-sensitive-to-carbon.html), and *Science Codex* (http://www.sciencecodex.com/todays_climate_more_sensitive_to_carbon_dioxide_than_in_past_12_million_years-92848.]

Communications tools

The Spring issue of the *Core Discoveries* newsletter was published and distributed this quarter and included articles on recent and upcoming expeditions, Program science, education and diversity news, and updates from NSF. The full-color newsletter is available online (http://www.oceanleadership.org/programs-and-partnerships/scientific-ocean-drilling/core-discoveries-newsletter/).

The USIO's outreach-focused Twitter account, @SeafloorSci, gained many followers this quarter by posting news from expeditions and links to related media. The account had approximately 200 followers at the end of June and more followers are being added 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).

- Fisher, A.T., Tsuji, T., **Petronotis, K.,** Wheat, C.G., Becker, K., Clark, J.F., Cowen, J., Edwards, K., Jannasch, H., and the IODP Expedition 327 and Atlantis Expedition AT18-07 Shipboard Parties, 2012. IODP Expedition 327 and Atlantis Expedition AT18-07: observatories and experiments on the eastern flank of the Juan de Fuca Ridge. *Sci. Drill.,* 13:4–11. doi:10.2204/iodp.sd.13.01.2011
- **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
- Ohno, M., Hayashi, T., Komatsu, F., Murakami, F., Zhao, M., Guyodo, Y., Acton, G., **Evans, H.F.,** and Kanamatsu, T., 2012. A detailed paleomagnetic record between 2.1 and 2.75 Ma at IODP Site U1314 in the North Atlantic: geomagnetic excursions and the Gauss-Matuyama transition. *Geochem., Geophys., Geosyst.,* 13:Q12Z39. doi:10.1029/2012GC004080
- Zhang, G., Smith-Duque, C., Tang, S., Li, H., **Zarikian, C.,** D'Hondt, S., Inagaki, F., and IODP Expedition 329 Scientists, 2012. Geochemistry of basalts from IODP Site U1365: implications for magmatism and mantle source signatures of the mid-Cretaceous Osbourn Trough. *Lithos,* 144–145:73–87. doi:10.1016/j.lithos.2012.04.014

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.

- Danigelis, A., 2012. Earth suffers from CO_2 allergy. *Discovery News,* 7 June 2012. http://news.discovery.com/earth/earth-developed-a-carbon-dioxide-allergy-120607.html [reposted at http://www.livescience.com/20846-earth-suffers-allergy.html]
- Deschamps, P., Durand, N., Bard, E., Hamelin, B., Camoin, G., Thomas, A.L., Henderson, G.M., Okuno, J., and Yokoyama, Y., 2012. Ice-sheet collapse and sea-level rise at the Bølling warming 14,600 years ago. *Nature (London, U. K.),* 483(7391):559–564. doi:10.1038/nature10902
- Laeschke, B.F., 2012. Ocean currents, not greenhouse gases, determined climate in the past. *Global Adventures,* 7 June 2012. http://www.global-adventures.us/2012/06/07/ocean-currents-climate/
- Lambert, H., 2012. Discovering science at sea. *TAMUtimes,* 13 June 2012. http://education.tamu.edu/news-archive/2012/06/discovering-science-sea
- Page, L., 2012. 10m years ago there was less CO_2—but the Earth was WARMER. *The Register* (UK), 7 June 2012. http://www.theregister.co.uk/2012/06/07/warmth_and_carbon_decoupled_miocene/
- *ScienceDaily,* 2012. Coral links ice sheet collapse to ancient 'mega flood.' *ScienceDaily.com,* 3 April 2012. http://www.sciencedaily.com/releases/2012/04/120403135516.htm
- *ScienceDaily,* 2012. Exceptional rise in ancient sea levels revealed. *ScienceDaily.com,* 5 June 2012. http://www.sciencedaily.com/releases/2012/06/120605102803.htm
- *Zee News,* 2012. Sea temperatures not always as sensitive to CO2 as today. *Zee News,* 7 June 2012. http://zeenews.india.com/news/eco-news/sea-temperatures-not-always-as-sensitive-to-co2-as-today_780302.html

COMMUNICATIONS TRAINING

The USIO provided several communications training opportunities to members of the U.S. Advisory Committee for Scientific Ocean Drilling (USAC) at their meeting in June.

LEGACY DOCUMENTATION

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

Legacy digital archive

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 the 6 June press release (see “Public relations materials”) as well as other Program-related products.

APPENDIX A: FINANCE REPORT

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

APPENDIX B: TRAVEL

Purpose*	Category	Dates	Location	Institution: Personnel
Motion Decoupled Hydraulic Delivery System (MDHDS) testing	Equipment testing	3 April 2012	Sugar Land, TX	LDEO: G. Iturrino TAMU: B. Aduddell, L. Chen, D. Ferrell, K. Grigar
Kaseya Software demo	Training	4 April 2012	Houston, TX	TAMU: D. Ponzio
Meetings with freight vendors (site visit and inspection)	Vendor meeting	4 and 5 April 2012	Houston, TX	TAMU: T. Brashear, S. Dillard
Radiation Safety Training and Inspections	Training	16–19 April 2012	Curaçao	Trainer: D. Menchaca
Expedition 340 port call	Port call activities	16–20 April 2012	Curaçao	TAMU: B. Julson, M. Malone, R. Mitchell, J. Rosser
LDEO IT Systems upgrade	Maintenance	17 April–8 May 2012	Curaçao	LDEO: T. Baker
LDEO IT Systems upgrade	Maintenance	19–28 April 2012	Curaçao	LDEO: G. Sarker
Basic and Advanced Public Purchasing	Training	22–26 April 2012	Austin, TX	TAMRF: M. Strickland
Expedition 339 Postexpedition Meeting	Postexpedition Meeting	22–28 April 2012	College Station, TX	LDEO: T. WIlliams
European Geophysical Union (EGU) General Assembly	Conference	23–26 April 2012	Vienna, Austria	Ocean Leadership: D. Divins, M. Wright
NSF Large Facility Workshop	Meeting	23–27 April 2012	East Lansing, MI	TAMU: B. Clement
Expedition 342 Orientation	Training	25–27 April 2012	Washington, DC	Onboard Education Officer: C. Scully
Offshore Technology Conference (OTC) 2012	Conference	30 April–3 May 2012	Houston, TX	LDEO: E. Meissner, S. Mrozewski TAMU: B. Aduddell, L. Chen, D. Ferrell, K. Grigar, M. Meiring, S. Midgley, B. Rhinehart
Building U.S. Strategies Workshop	Workshop	30 April–2 May 2012	Denver, CO	Ocean Leadership: D. Divins, M. Morell
LDEO IT Systems upgrade	Maintenance	4–8 May 2012	Curaçao	LDEO: D. Quoidbach
Cobham Sea-Tel Satellite Training	Training	6–12 May 2012	San Francisco, CA	TAMU: M. Cannon
Oracle Training	Training	6–12 May 2012	Reston, VA	TAMU: J. Zhao
Large Diameter Pipe Handling Infrastructure Meeting	Meeting	7–9 May 2012	Curaçao	LDEO: G. Iturrino

Purpose*	Category	Dates	Location	Institution: Personnel
Expedition 330 Operations Review Task Force (ORTF)	SAS	10 and 11 May 2012	Edinburgh, United Kingdom	LDEO: J. Inwood TAMU: M. Malone
Data Management Coordination Group (DMCG) Meeting	Meeting	13–18 May 2012	Edinburgh, United Kingdom	Ocean Leadership: D. Fils TAMU: J. Rosser
Proposal Evaluation Panel (PEP) Meeting	SAS	14 and 15 May 2012	Edinburgh, United Kingdom	Ocean Drilling: D. Divins, M. Morell LDEO: A. Slagle TAMU: P. Blum, M. Malone, K. Petronotis
Net training	Training	14–19 May 2012	Rockville, MD	TAMU: S. Nagarajan
Intel International Science and Engineering Fair (ISEF)	Education/ Outreach	15–17 May 2012	Pittsburgh, Pennsylvania	Ocean Leadership: G. Myers, J. Swanseen, K. Yarincik
Operations Task Force (OTF) Meeting	SAS	16 and 17 May 2012	Edinburgh, United Kingdom	Ocean Leadership: D. Divins TAMU: M. Malone
Improve Your Analytical Skills workshop	Training	16–18 May 2012	Arlington, VA	TAMRF: B. Lancaster, R. Watkins
Council of Science Editors (CSE) Annual Meeting	Conference	18–22 May 2012	Seattle, WA	TAMU: G. Lowe
Nannotax workshop	Training	19–22 May 2012	Houston, TX	TAMU: S. Herrmann
2012 ICP Operator Training, Teledyne-Leeman Labs	Training	21–25 May 2012	Hudson, NH	TAMU: M. Bertoli, E. Moortgat
Preparation for Expedition 342	Meeting	21–29 May 2012	Palisades, NY	LDEO: A. Fehr
Cost Price Analysis Negotiations & Contract Administration	Training	22–25 May 2012	Austin, TX	TAMRF: M. Strickland
Ship-to-Shore School of Rock 2012	Education/ Outreach	24 May–2 June 2012	Curaçao	Ocean Leadership: L. Peart, S. Cooper, J. Collins TAMU: C. Broyles External Participants: T. Bishop, H. Walters, B. Manning, C. Yau, D. Casey, K. Thompson, S. Nanez, B. Becker, P. Ciesel, K. Kurtz, A. Feagan, G. Schuster, J. Lewis, J. Snow, L. Sautter
Expedition 342 port call	Port call activities	2–5 June 2012	St. George, Bermuda	TAMU: B. Clement, R. Davis, P. Gates, D. Houpt, B. Julson, J. Miller, R. Mitchell
Expedition 342 Onboard Education Program	Education/ Outreach	3 June–1 August 2012	St. George, Bermuda	Onboard Education Officer: C. Scully Videographer: D. Brinkhaus

Purpose*	Category	Dates	Location	Institution: Personnel
FY12 Annual Report and Publication planning meetings	Planning	3–13 June 2012	College Station, TX	TAMU: G. Lowe
Opportunities for Enhancing Diversity in the Geosciences (OEDG) School of Rock 2012	Education/ Outreach	4–7 June 2012	College Station, TX	Ocean Leadership: L. Peart†, J. Collins† External Participants: K. Esslinger, J. Hams, D. Hellstern, L. Krissek, L. Millwood
Expedition 339 Sampling Party	Meeting	9–16 June 2012	Bremen, Germany	TAMU: C. Alvarez-Zarikian, G. Barrett, C. Broyles, P. Rumford
State TX Basic Public Purchasing	Training	11–13 June 2012	Austin, TX	TAMRF: R. Watkins
Video Editing Digitrain	Training	17–23 June 2012	Addison, TX	TAMU: B. Crawford
Science Implementation and Policy Committee (SIPCOM) Meeting	SAS	19 and 20 June 2012	Washington, DC	TAMU: B. Clement
State TX Advanced Public Purchasing	Training	20–22 June 2012	Austin, TX	TAMRF: R. Watkins
International Working Group Plus (IWG+) Meeting	SAS	21 and 22 June 2012	Arlington, VA	TAMU: B. Clement
2012 IODP-USIO Diversity Internship	Education/ Outreach	20 June–7 September 2012	Washington, DC	Intern: H. Tesoro

*Travel associated with meetings, conferences, port call work, and nonroutine sailing activities.
†Travel in support of USIO activities but paid from another source.

APPENDIX C: USIO QUARTERLY REPORT DISTRIBUTION

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