INTEGRATED OCEAN DRILLING PROGRAM

United States Implementing Organization

FY11 Quarterly Report 1

1 October–31 December 2010

NSF Contract OCE-0352500

IODP-MI Contract IODP-MI-05-03

Submitted by the USIO

to

The National Science Foundation and

IODP Management International, Inc.

Integrated Ocean Drilling Program
United States Implementing Organization

14 February 2011

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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) FY11 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.[1]

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 IODP-USIO Annual Program Plan to IODP-MI

The IODP-USIO Annual Program Plan submitted to IODP-MI on 4 August 2010 was accepted on 12 October 2010.

FY11 IODP-USIO Annual Program Plan to NSF

The IODP-USIO Annual Program Plan submitted to NSF on 4 August 2010 was accepted on 27 September 2010.

FY10 Q4 IODP-USIO Quarterly Report

The USIO report for the fourth quarter of FY10 (July–September 2010) was submitted to NSF and IODP-MI on 29 November 2010. (http://iodp.tamu.edu/publications/AR/FY10/FY10_Q4.pdf)

FY10 Annual Report

Production of the IODP-USIO FY10 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, 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

USIO representatives from LDEO, TAMU, and Ocean Leadership met at LDEO on 19 and 20 October 2010 to discuss IODP science data collection, analysis, and dissemination. Topics included management of third-party applications, such as the CoreWall suite; USIO testbed needs and future capability;

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

Cumulus capability; data group Web workspace; Digital Object Identifiers (DOIs); SDRMv2; and Web infrastructure.

USIO System Integration Team

The USIO System Integration Team met at LDEO on 17 and 18 November 2010 to discuss topics including strategic planning and alliance effectiveness, efficiency, and collaboration. Efforts and strategies for leading the renewal of scientific ocean drilling in the United States were also discussed.

Conference and Meeting Schedule

Conference/Meeting	Date	Location
Science Steering and Evaluation Panel (SSEP) Meeting	9–12 November 2010	Portland, Oregon
Data Management Coordination Group (DMCG) Meeting	18–21 October 2010	Newark, New Jersey
USIO System Integration Team Meeting	17 and 18 November 2010	Palisades, New York

Contract Activity

Ocean Leadership

Contract Modifications

Ocean Leadership received the following modifications during the reporting period.

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

- Modification 29: Provided $1,000,000 in incremental funding for the FY11 Annual Program Plan science operating cost (SOC) budget and approved the FY11 Annual Program Plan SOC budget in the amount of $4,078,906.
- Modification 30: Provided $1,050,000 in incremental funding for the FY11 Annual Program Plan SOC budget.

Subcontract Modifications

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

Ocean Leadership Subcontract JSC 4-03 with LDEO

- Modification 43: Provided $2,091,590 in incremental funding toward FY11 platform operating cost (POC) activities and approved the FY11 Annual Program Plan (not including SOC) dated 3 August 2010 in the amount of $6,520,465.
- Modification 44: Provided $226,632 in incremental funding toward FY11 SOC activities and approved subcontractor's FY11 Annual Program Plan SOC budget of $923,310.

Ocean Leadership Subcontract JSC 4-02 with TAMRF

- Modification 54: Provided $17,843,165 in incremental funding toward FY11 POC activities and approved the FY11 Annual Program Plan (not including SOC) dated 3 August 2010 in the amount of $55,625,503.
- Modification 55: Provided $663,853 in incremental funding toward FY11 SOC activities and approved the FY11 Annual Program Plan SOC budget of $2,707,794.

LDEO

Subcontract Modifications

LDEO issued the following subcontract modifications during the reporting period.

LDEO Subcontract with Schlumberger

- Amendment 14: Provided the first FY11 funding increment in the amount of $583,147.02.

TAMRF

Subcontract Modifications

TAMRF issued the following subcontract modifications during the reporting period.

TAMRF Subcontract with Overseas Drilling Limited

- Amendment 12: Increased operational funding in the amount of $11,265,000.

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

- 15 December 2010: Issued a purchase order to Rignet, Inc., for managed satellite communication services through 30 October 2011 in the amount of $230,485.

Miscellaneous Activity

- 9 October 2010: Submitted fleet (vehicle) data using the Federal Automotive Statistical Tool system.
- 15 October 2010: Submitted the FY10 annual inventory results and required annual property reports under Ocean Leadership Subcontract JSC4-02.
- 23 October 2010: Submitted a request to Ocean Leadership to increase the purchase order threshold to $5,000.
- 26 October 2010: Submitted the Individual Subcontract Report, the Summary Subcontract Report, and the Year End Small Disadvantaged Supplementary Report in accordance with TAMRF's approved Small Business Plan under Ocean Leadership Subcontract JSC4-02.

Personnel Status

Ocean Leadership

The following positions were vacated during the quarter:

- Executive Assistant to the President (Molly Fink): 29 October 2010
- Administrative Assistant, Deep Earth Academy (Katie Golieb): 22 December 2010

No positions were opened or advertised during the quarter.

The following position was filled during the quarter:

- Senior Manager, Executive Office (Colin Reed): 1 November 2010

LDEO

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

TAMU

The following positions were vacated during the quarter:

- Staff Scientist (Kusali Gamage): 11 November 2010
- Publications Specialist (Kathy Phillips): 30 November 2010

The following positions were opened and advertised during the quarter:

- Assistant Research Specialist

- Staff Scientist

The following positions were filled during the quarter:

- Manager of Development, IT, and Databases (Jim Rosser) 1 November 2010

USIO Web Services

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

USIO Web Site Statistics

FY11 Q1 USIO Web Site*				
Parameter	**www.iodp-usio.org**	**iodp.ldeo.columbia.edu**	**iodp.tamu.edu**	**Total**
Page views	18,903	7,463	256,089	282,455
Site visits	11,991	1,142	62,037	75,170

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

Legacy Documentation

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 FY10 Q3 report, FY10 close-out report, operations assessment report, and contract modifications.

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 Web sites, which highlight the scientific and technical accomplishments of these ground-breaking precursors to IODP. The Legacy Web sites 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 Web site and the Deep Sea Drilling Project (DSDP) Publications Web site are hosted at TAMU. The ODP Legacy Web site is hosted at Ocean Leadership.

Legacy Web Site Statistics

	FY11 Q1 ODP Web Site*			FY11 Q1 DSDP Web Site*
Parameter	**www-odp.tamu.edu**	**www.odplegacy.org**	**Total ODP**	**www.deepseadrilling.org**
Page views	1,281,067	8,162	1,289,229	115,628
Site visits	336,482	3,718	340,200	36,849

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

Program Management and Performance Review

The NSF Contract OCE-0352500 requires that an evaluation of USIO operations be conducted every three years. As mentioned in the FY10 Q4 report, a team of external experts from the scientific ocean drilling community (i.e., Laboratory System Review Team) conducted an evaluation of the *JOIDES Resolution*'s science laboratory systems and data handling capabilities at the end of FY10 Q3 and beginning of FY10 Q4 after a full year of operations. The team's final report was provided to the USIO on 12 August 2010 and was made available online this quarter (http://www.iodp-usio.org/Publications/IODP_OA_2010.pdf).

Other Projects and Activities

USIO-TAMU Project Portfolio Management Program

USIO-TAMU initiated a project prioritization process this quarter, introducing a Project Portfolio Management (PPM) program to fine tune the way different types of USIO projects are organized, managed, and carried out. The management team developed an assessment tool to rank the proposed projects based on impact on the scientific community, urgency, and a number of other factors. Ranking was completed and project scoping was initiated, with the goal of moving forward with two to three of the major projects on a project team basis. By 15 December 2010, there was a prioritized list of 112 projects and a solid process in place for managing existing and new projects. The assessment process developed for the PPM program will be used to help prioritize newly proposed projects that emerge during expeditions by putting them into the perspective of the Program's long-term goals.

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

Expedition		Port (Origin)	Dates[1, 2]	Total Days (Port/ Sea)	Days at Sea (Transit[3]/ Ops)	Co-Chief Scientists	USIO Contacts[4]
South Pacific Gyre Microbiology	329	Papeete, Tahiti	9 October–13 December 2010	65 (4/61)	61 (9/52)	S. D'Hondt, F. Inagaki	TAMU: C. Alvarez Zarikian* LDEO: H. Evans^
Louisville Seamount Trail	330	Auckland, New Zealand	13 December 2010–12 February 2011	61 (5/56)	56 (8/48)	A. Koppers, T. Yamazaki	TAMU: J. Geldmacher* LDEO: L. Anderson^
Transit		Auckland, New Zealand	12 February–15 March 2011	31 (5/26)			
Costa Rica Seismogenesis Project	334	Puntarenas, Costa Rica	15 March–13 April 2011	29 (2/27)	27 (1/26)	P. Vannucchi, K. Ujiie	TAMU: P. Blum* LDEO: A. Malinverno^
Superfast Spreading Rate Crust 4[5]	335	Puntarenas, Costa Rica	13 April–3 June 2011	51 (4/47)	47 (8/39)	D. Teagle, B. Ildefonse	TAMU: P. Blum* LDEO: G. Guerin^
Non-IODP							
Mid-Atlantic Ridge Microbiology	336	Bridgetown, Barbados	16 September–19 November 2011	64 (4/60)	60 (10/50)	K. Edwards, W. Bach	TAMU: A. Klaus* LDEO: L. Anderson^
Mediterranean Outflow[6]	339	Ponta Delgada, Azores	19 November–19 January 2012	61 (5/56)	56 (5/51)	J. Hernández Molina D. Stow	TAMU: C. Alvarez Zarikian* LDEO: T. Williams^

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

USIO Expeditions

Expedition 327: Juan de Fuca Ridge-Flank Hydrogeology

Postexpedition Activities

Final editing and input to the *Preliminary Report* was completed prior to publication. Initial postexpedition review and Operations Review Task Force (ORTF) report preparation activities were initiated.

Expedition 328: Cascadia ACORK

Postexpedition Activities

Final editing and input to the *Preliminary Report* was completed prior to publication.

Expedition 329: South Pacific Gyre Microbiology

Expedition Planning

Additional specialized outfitting was required in port to accommodate traditional and nontraditional microbiological and chemical requirements for the expedition.

Expedition Staffing

Expedition 329 Science Party Staffing Breakdown	
Member Country/Consortium	**Participants**
USA: United States Science Support Program (USSSP)	7*
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)	9†
South Korea: Korea Integrated Ocean Drilling Program (K-IODP)	2†
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)	0

*The eighth USSSP-supported scientist withdrew in port because of a family emergency.
†The ninth ESSAC and second IODP-China participants were staffed to fill emergency needs and hence do not count toward PMO quotas.

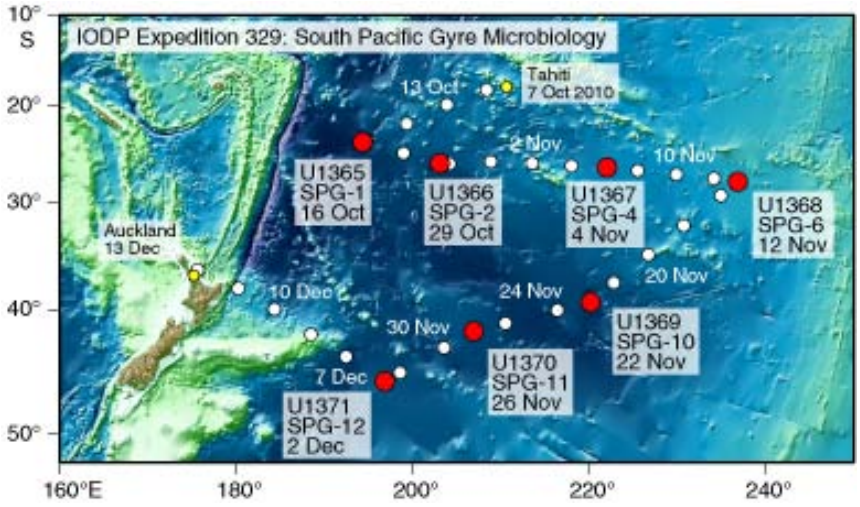
Logistics Support

All specialized chemicals and hazardous materials that were shipped for this expedition successfully arrived in Tahiti, completing this logistically challenging shipping effort.

Expedition Operations

After receiving the approved recommendation from the Environmental Protection and Safety Panel (EPSP), the planned operational sequence for each site was changed to wash down (not core) through the sediment to determine depth to basement to maximize advanced piston coring (APC) as close to basement as possible without damaging operational hardware. During the third week of the expedition, a breakdown caused by failure of one of the drilling sheaves required the drilling line to be restrung, bypassing the seized sheave, which allowed operations to continue without coming into port for repair.

Expedition 329 Site Map



Expedition 329 Coring Summary

Site	Hole	Latitude	Longitude	Water depth (m)	Cores (n)	Interval cored (m)	Core recovered (m)	Recovery (%)
U1365	U1365A	23°51.0493'S	165°38.6624'W	5695.6	26	75.5	74.1	98.0
	U1365B	23°51.0388'S	165°38.6629'W	5694.7	8	54.6	55.8	102.0
	U1365C	23°51.0377'S	165°38.6502'W	5696.7	8	48.8	39.7	81.0
	U1365D	23°51.0359'S	165°38.6381'W	5693.7	2	19.0	18.9	99.0
	U1365E	23°51.0489'S	165°38.6420'W	5693.7	11	53.2	39.7	75.0
				Site U1365 Totals:	**55**	**251.1**	**228.1**	**91.0**
U1366	U1366A	26°03.0945'S	156°53.6591'W	5135.0	0	0.0	0.0	0.0
	U1366B	26°03.0950'S	156°53.6714'W	5130.8	2	17.2	17.3	101.0
	U1366C	26°03.0845'S	156°53.6700'W	5129.5	3	25.0	25.4	102.0
	U1366D	26°03.0850'S	156°53.6652'W	5126.1	4	20.9	18.9	90.0
	U1366E	26°03.0843'S	156°53.6825'W	5127.8	1	4.7	4.7	100.0
	U1366F	26°03.0836'S	156°53.6937'W	5127.0	4	30.1	30.2	100.0
				Site U1366 Totals:	**14**	**97.9**	**96.5**	**98.6**
U1367	U1367A	26°28.8972'S	137°56.3646'W	4290.9	0	0.0	0.00	0.0
	U1367B	26°28.8966'S	137°56.3777'W	4288.9	4	22.3	22.3	100.0
	U1367C	26°28.8860'S	137°56.3783'W	4288.2	4	26.7	27.0	101.0
	U1367D	26°28.8861'S	137°56.3659'W	4288.1	4	25.5	24.5	96.0
	U1367E	26°28.8856'S	137°56.3538'W	4287.6	3	24.4	23.2	95.0
	U1367F	26°28.8960'S	137°56.3538'W	4288.9	5	38.5	4.3	11.0
				Site U1367 Totals:	**20**	**137.4**	**101.3**	**80.6**
U1368	U1368A	27°55.0017'S	123°09.6562'W	3740.0	0	0.0	0.00	0.0
	U1368B	27°55.0024'S	123°09.6679'W	3739.1	3	16.0	15.8	99.0
	U1368C	27°54.9916'S	123°09.6681'W	3738.5	2	16.3	16.3	100.0
	U1368D	27°54.9920'S	123°09.6561'W	3739.1	2	15.0	15.0	100.0
	U1368E	27°54.9918'S	123°09.6442'W	3740.9	2	10.6	10.6	100.0
	U1368F	27°55.0021'S	123°09.6433'W	3741.0	14	115.1	31.7	28.0
				Site U1368 Totals:	**23**	**173.0**	**89.5**	**85.4**

Site	Hole	Latitude	Longitude	Water depth (m)	Cores (n)	Interval cored (m)	Core recovered (m)	Recovery (%)
U1369	U1369A	39°18.6177'S	139°48.0383'W	5279.4	0	0.0	0.0	0.0
	U1369B	39°18.6178'S	139°48.0522'W	5275.2	3	15.9	18.1	114.0
	U1369C	39°18.6070'S	139°48.0519'W	5276.9	3	14.6	16.1	110.0
	U1369D	39°18.6069'S	139°48.0378'W	5276.9	1	0.1	0.1	80.0
	U1369E	39°18.6070'S	139°48.0246'W	5277.7	3	15.5	15.5	100.0
				Site U1369 Totals:	**10**	**46.1**	**49.8**	**101.0**
U1370	U1370A	41°51.1289'S	153°6.3799'W	5074.6	0	0.0	0.0	0.0
	U1370B	41°51.1285'S	153°6.3953'W	5074.6	1	7.8	7.8	100.0
	U1370C	41°51.1171'S	153°6.3975'W	5074.6	0	0.0	0.0	0.0
	U1370D	41°51.1156'S	153°6.3812'W	5073.6	8	68.2	70.3	103.0
	U1370E	41°51.1158'S	153°6.3668'W	5074.2	9	65.6	70.2	107.0
	U1370F	41°51.1267'S	153°6.3674'W	5073.6	8	64.7	66.3	103.0
				Site U1370 Totals:	**26**	**206.3**	**214.6**	**82.6**
U1371	U1371A	45°57.8492'S	163°11.0513'W	5316.0	0	0.0	0.0	0.0
	U1371B	45°57.8509'S	163°11.0673'W	5316.4	1	8.1	8.2	101.0
	U1371C	45°57.8404'S	163°11.0684'W	5312.0	1	9.5	9.8	103.0
	U1371D	45°57.8394'S	163°11.0512'W	5311.1	14	126.0	126.9	101.0
	U1371E	45°57.8397'S	163°11.0365'W	5310.2	14	128.2	118.2	92.0
	U1371F	45°57.8502'S	163°11.0369'W	5308.3	14	130.6	118.4	91.0
	U1371G	45°57.8637'S	163°11.0360'W	5314.1	1	1.4	1.4	98.0
	U1371H	45°57.8648'S	163°11.0512'W	5310.3	1	6.2	6.2	100.0
				Site U1371 Totals:	**46**	**410.0**	**389.0**	**98.0**
Expedition 329 Totals:					**194**	**1321.8**	**1168.8**	**88.0**

Science Results

Expedition 329 made major strides toward fulfilling its objectives. Shipboard studies (1) documented many fundamental aspects of subseafloor sedimentary habitats, metabolic activities, and biomass in this very low activity sedimentary ecosystem; (2) significantly improved understanding of how oceanographic factors control variation in subseafloor sedimentary habitats, activities, and biomass from gyre center to gyre margin; (3) quantified the availability of dissolved hydrogen throughout the sediment column; and (4) documented first-order patterns of basement habitability and potential microbial activities. A broad range of postexpedition studies will complete the expedition objectives.

Expedition 329 sites are located along two transects, hinged in the center of the South Pacific Gyre. The first transect progresses from the western edge of the gyre (Site U1365) to the gyre center (Site U1368). The second transect goes from the gyre center (Site U1368) through the southern gyre edge (U1370) to the northern edge of the upwelling region south of the gyre (U1371).

Subseafloor sedimentary habitability and life: The dominant lithology is zeolitic metalliferous clay at the deeper water sites on older basement (58 to ≤120 Ma) within the gyre (Sites U1365, U1366, U1369, and U1370), where manganese nodules occur at the seafloor and intermittently within the upper sediment column. Chert and porcellanite layers are pronounced in the lower half of the sediment column at Sites U1365 and U1366. The dominant lithology is carbonate ooze at Site U1368, the site on youngest basement (13.5 Ma) and, consequently, in the shallowest water. At Site U1371, which lies on relatively old basaltic basement (71.5–73 Ma) just south of the gyre, the dominant lithology is siliceous ooze, with metalliferous zeolitic clay at the base of the sediment column.

Throughout the South Pacific Gyre (Sites U1365–U1370), the concentration profiles indicate that the subseafloor rate of microbial respiration is generally extremely low. Geographic variation in subseafloor profiles of dissolved nutrients, dissolved inorganic carbon, solid-phase total organic carbon, and solid-phase total nitrogen are consistent with the magnitude of organic-fueled subseafloor respiration declining from outside the gyre to the gyre center. At all sites located within the gyre, microbial cell counts are

lower than at the same sediment depths in all sites previously cored by scientific ocean drilling. Microbial cell counts are generally higher at the site outside the gyre (Site U1371) than at the sites within the gyre.

Paleoceanography: High-resolution measurements of dissolved chloride and nitrate concentrations, as well as formation factor, provide the opportunity for reconstruction of glacial seawater characteristics through the South Pacific Gyre. Given the importance of this region in terms of ocean circulation, such reconstruction will greatly contribute to understanding of the global ocean-climate system.

Basalt alteration and habitability: At the sites with oldest basement, alteration of the basement basalt continues on the timescale of formation fluid replacement. At all sites, the presence of dissolved oxygen in the lowermost sediment at below-deepwater concentrations suggests that either basement oxidation has occurred since seawater migrated into the formation or oxygen has been lost to the overlying sediment along the flow path. At the sites with deepest sediment (Sites U1365, U1370, and U1371), dissolved potassium profiles indicate that dissolved potassium fluxes into the underlying basalt and basalt alteration continues despite the great age of basement at all three sites (84–120 Ma, 74–79.5 Ma, and 71.5–73 Ma, respectively). Profiles of dissolved nutrients indicate that if microbial life is present in the uppermost basalt it is not limited by access to electron acceptors (oxygen, nitrate) or major nutrients (carbon, nitrogen, phosphorus).

Logging Summary: Site U1368 was the only site logged during Expedition 329. The two tool strings deployed in Hole U1368F, the triple-combo and Formation MicroScanner (FMS)-gamma ray, were shortened to include only the most critical measurements to maximize coverage in this shallow hole. These measurements included bulk density, spectral natural gamma ray radioactivity, electrical resistivity, and microresistivity images of the borehole wall. The base of the bottom-hole assembly was set 34 meters deep in the hole, 17 meters below the sediment/basement interface, and ~50 meters of basement rock was logged in open hole. The FMS microresistivity images show that the basement is composed of pillow basalts.

Expedition 330: Louisville Seamount Trail

Expedition Planning

Final science planning and logistical preparations continued, including liaisons with third-party magnetic logging tool proponents.

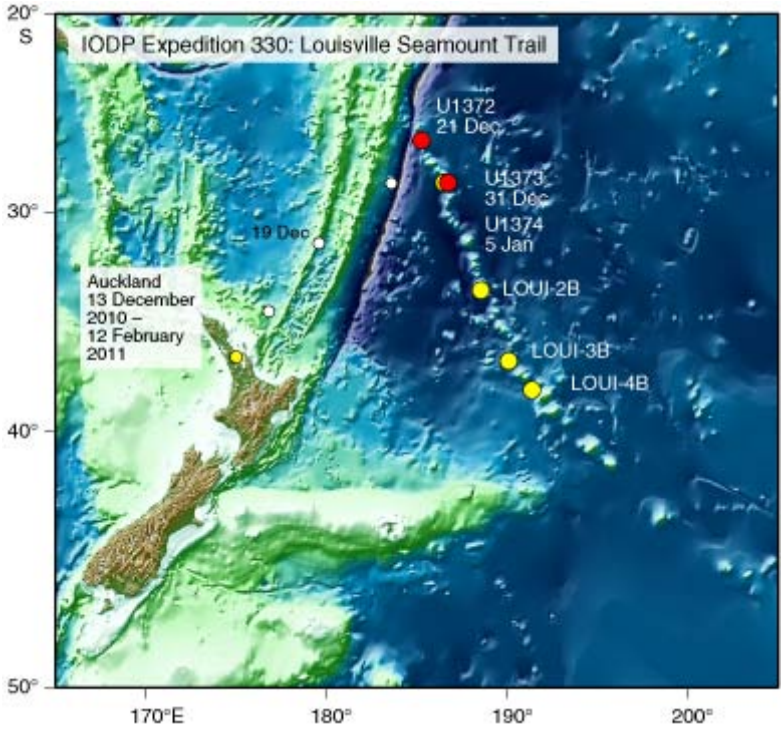
Expedition Staffing

Expedition 330 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
South Korea: Korea Integrated Ocean Drilling Program (K-IODP)	0
People's Republic of China: IODP-China	1
Australia and New Zealand: Australia-New Zealand IODP Consortium (ANZIC)	2
India: Ministry of Earth Science (MoES)	0

Expedition Operations

Expedition 330 began operations coring at the oldest site of the seamount transect (Site U1372), reaching 232 meters below seafloor (mbsf) with an average recovery of 60% before the drill string became irretrievably stuck and had to be severed, concluding operations at Site U1372. By the end of the quarter, the ship had moved to alternate Site LOUI-6A, located on a seamount of similar age as Site U1372 to attempt to recover a complete record from an older part of the Louisville Seamount Trail transect.

Expedition 330 Site Map



Note: Sites marked in red were occupied during FY10 Q4.

Expedition 334: Costa Rica Seismogenesis Project

Expedition Planning

Work continued on a safety monitoring protocol for deploying logging-while-drilling (LWD) tools prior to coring. The protocol will be submitted for review by EPSP and the TAMU safety panel.

The end port for the expedition was switched from Balboa, Panama, to Puntarenas, Costa Rica, because of logistical challenges with Balboa. The port change resulted in a shorter transit at the end of the expedition, and the expedition schedule was changed accordingly.

Expedition Staffing

New applications were solicited and received and 10 new invitations were issued and accepted, completing science staffing for the expedition.

Clearance and Permitting Activities

Costa Rica has not yet responded via the U.S. State Department to the clearance application submitted on 23 September 2010.

Expedition 335: Superfast Spreading Rate Crust 4

Expedition Planning

The starting port for the expedition was switched from Balboa, Panama, to Puntarenas, Costa Rica, because of logistical challenges with Balboa. This port change shifted the start and end date for the cruise by one day. Expedition 335 scientists will disembark at Balboa, Panama, prior to the ship transiting the Panama Canal.

Expedition Staffing

Scientific staffing was completed in November 2010; however, one scientist withdrew and the Program Member Office (PMO) began seeking a replacement.

Clearance and Permitting Activities

An application for clearance was submitted to Costa Rica on 12 November 2010 for the Superfast CRISP contingency requirement.

Environmental Assessment

An environmental evaluation was completed and submitted to NSF for use of seismic sources to conduct a check shot survey.

Expedition 336: Mid-Atlantic Ridge Microbiology

Expedition Planning

An engineering design review meeting was held on 4 October 2010 in College Station, Texas, which included the Co-Chief Scientists, two proponents and proponent engineer (in person and remotely), and pertinent members of the USIO project team. The purpose of the meeting was to finalize design requirements in preparation for pending equipment orders and contingency planning.

Biweekly teleconferences were initiated between the USIO project team (science, operations, and engineering), Co-Chief Scientists, and proponent group to monitor progress and ensure effective and thorough communication. Quotes for packers were received and reviewed, and the proponent group prepared to issue an order before end of the quarter. Finalization of requirements for umbilicals was a priority at the end of the quarter in support of an effort to solicit a quote in early 2011. Tracking and interfacing continued with the proponent group developing the third-party logging tool.

Expedition Staffing

Twenty-one scientists accepted invitations during the quarter. Four scientists withdrew and replacements were sought.

Environmental Assessment

NSF provided authorization to proceed with the Vertical Seismic Profiling (VSP) activities as planned.

Expedition 339: Mediterranean Outflow

Expedition Staffing

Invitations for Co-Chief Scientists were issued and accepted. The staffing timeline was developed with the PMOs and the call for applications was issued.

FY12 Expedition: Cascadia Margin

Expedition Planning

A planning meeting was held 25 and 26 October 2010 in La Jolla, California, to continue to refine the circulation obviation retrofit kit (CORK) designs. Representatives from TAMU science, operations, and engineering attended. A teleconference was held on 10 November 2010 to address action items from the October meeting. Proponents went to Washington, DC, to brief NSF on plans and budgets for the instrumentation of the CORKs. An engineering design review meeting was scheduled for January 2011.

Transit Activities

During the 19 September–9 October 2010 transit from Victoria, British Columbia (Canada), to Papeete, Tahiti, preparations were made for the specific needs of the Expedition 329 South Pacific Gyre Microbiology mission. Projects included organizing and outfitting the cold laboratory, DOE special task van (including additional freezer space and isolated core squeezers), radioisotope van, and core storage area. In addition, the new towed magnetometer was deployed and tested.

Analytical Systems
Projects and Other Activities
Geosciences Laboratory (ODASES)

Six different projects using the X-ray fluorescence (XRF) scanner were conducted during the quarter, amounting to about 490 hours of analytical time. The TAMU Ocean Drilling and Sustainable Earth Science (ODASES) faculty created a subcommittee to provide advice to the USIO on data management for instruments in the ODASES laboratory.

Engineering Support
Projects and Other Activities
Large Diameter Pipe Handling Infrastructure

Contractual agreements were negotiated with Howard and Associates Inc. (HAI) and Blohm and Voss (B&V). HAI will have significant involvement in the technical aspects of this project, including engineering oversight, elevator design and feasibility assessment, final equipment recommendations, quote revisions, manufacturing oversight, prototype testing, functional testing on board the ship, and producing a final report. B&V will begin working on detailed engineering drawings that include the 350- and 500-ton elevators, elevator handler, bushing, and base plates The drawings will also include specifications of overall dimensions, weight, and center of gravity location required for determining if the infrastructure designs can be used onboard the *JOIDES Resolution* before manufacturing begins.

Magnetic Susceptibility Sonde Rebuild

The new coil configurations for the low-resolution sensor were manufactured and testing began, with signals from the reference, drive, and measurement coils recorded and filtered for improving signal to noise ratios. Development of the high-resolution sensor began, with pressure housing designs completed and fabrication scheduled to begin in FY11 Q2.

Multifunction Telemetry Module Project

The minor ground loop noise issues associated with the motion decoupled hydraulic delivery system (MDHDS) multifunction telemetry module (MFTM) were resolved. Testing of the MFTM–Electrical Release System (ERS)–MDHDS–temperature-to-pressure (T2P)–sediment temperature/pressure (SETP) tool configuration was scheduled for late January 2011. Deployment of the entire system in the Schlumberger Genesis well was targeted for FY11 Q2.

Development began for the Center for Dark Energy Biosphere Investigations (C-DEBI) MFTM. This module will be used for deploying a combination of LDEO and Schlumberger tools with a deep exploration biosphere investigative tool (DEBI-t) that is being developed by scientists and engineers from the University of Southern California, the National Aeronautic and Space Administration Jet Propulsion Laboratory at the California Institute of Technology, and Photon Systems, Inc.

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. The USIO will continue to routinely assess results and work with Schlumberger to optimize the system.

Projects for the upcoming maintenance period were discussed, including wireline tool maintenance and fixing a kink in the wireline spool that occurred during Expedition 330 severing operations. The current wireline spool will be replaced and the high-temperature wireline spool will be installed in preparation for Expedition 335.

Engineering Development: Drilling Sensor Sub

Replacement seals and minor hardware (e.g., new screws for cover plates) were ordered for a bench test anticipated in FY11 Q2.

Other Projects and Activities

Engineering Assistance for CDEX

USIO engineering staff performed routine recalibration of CDEX third-generation advanced piston corer temperature tools (APCT-3) this quarter.

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 FY11 Engineering Development project is a new magnetometer tool under development at LDEO. The multisensor magnetometer module (MMM) 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. This downhole magnetic information will complement core sample magnetic measurements and significantly enhance IODP's ability to magnetostratigraphically date sediment sequences.

Project Status

Specifications of the nonmagnetic pressure housings for the multisensor magnetometer module were finalized this quarter. Construction of power supply and communications boards neared completion, and work toward determining the location for the different instruments within the pressure housings 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).

Policy and Procedures

Loan Agreements for U-Channel Samples

As decided during the IODP Curator's Meeting in FY10, the three implementing organization (IO) repositories introduced the use of loan agreements that must be formally entered into by investigators requesting U-channel samples.

USIO Projects, Samples, and Moratorium Protocol for Legacy Cores

In accordance with the protocol drafted in August 2010 and reviewed this quarter, the USIO will continue to use the Janus Sample Request Database and Sample Request Form for recording all use of legacy cores from DSDP Leg 1 through IODP Expedition 312. The GCR will continue to distribute legacy requests to the Bremen Core Repository (BCR) and Kochi Core Center (KCC) for cores in their collections and will continue to record legacy sample request completion dates into Janus for all repositories.

Curation Strategies and Expedition Core Sampling

The USIO planned sample and curation strategies for Expeditions 334 and 335. USIO Curatorial Specialists supervised shipboard core sampling during Expeditions 329 and 330 and reviewed all shipboard and moratorium-related requests in coordination with the expedition Sample Allocation Committees. A total of 17,516 samples were taken during Expedition 329, including shipboard and personal samples. There were 47 personal sample requests.

Sample Materials Curation System

After the IODP Curator's Meeting at the end of FY10, the USIO worked on development of the new Sample/Data Request System to replace the Sample Materials Curation System. IODP Curatorial staff developed a list of desired changes to the first iteration of this system, and a second version reflecting those changes was made available for review and testing to begin in FY11 Q2.

Core Curation

All IODP core sample requests are handled by the GCR, BCR, and KCC. The USIO conducts all responsibilities associated with curation of core collections at the GCR, providing services in support of core sampling, analysis, and education.

The "Repository Activity" table below provides a summary of the number of samples taken during the quarter, details of the sample requests, and tours of the GCR.

Repository Activity

Gulf Coast Repository	Visitors	Request Number, Name, Country	Number of Samples
		22176A, Aze, United Kingdom	50
		762IODP, Moore, USA	27
		22177A, Dickens, Sweden	152
		20721E, Kirtland, USA	250
		22180A, Hodell, United Kingdom	459
	1	22191A, Denne, USA	43
		22185A, Pierce, USA	99
	1	22179A, Thomas, USA	17
	1	21765B, Hsiung, USA	13
		22188A, Herbert, USA	605
	1	22170B, Stepanova, Russia	21
		22177B, Dickens, Sweden	90
		910IODP, Backman, Sweden	216
		22166A, Bralower, USA	87
		22175A, Paytan, USA	20
		22200A, Yamamoto, Japan	257
		806IODP, Hu, USA	13
		22205A, Paull, USA	5
		22213A, Wade, United Kingdom	3
		836IODP, Prebble, New Zealand	12
		22199A, Bralower, USA	49
		22228A, Pike, United Kingdom	0
		908IODP, Westerhold, Germany	1,442
		22220A, Paull, USA	5
		20884B, Helenes, Mexico	21
		22218A, Baudin, France	18
		21341H, Rafter, USA	26
		756IODP, Straub, USA	17
		20755E, Schmidt, United Kingdom	16
		22223A, Bolton, Spain	22
		20780G, Koepke, Germany	16
		22170C, Stepanova, Russia	14

Gulf Coast Repository	Visitors	Request Number, Name, Country	Number of Samples
		22225A, Leduc, Germany	31
		22226A, Finkel, Canada	6
	9	22159A, Lyle, USA [educational]	75
		21983D, Yu, USA	2
	1	915IODP, Espejo, Spain	0
	1	22227A, Jeremiah, USA	72
	3	22029A, Blanchon, Mexico	0
	5	22197A, Roark, USA [educational]	15
	61	Tours (5) [public relations]	No samples
Total science:	**9**	37	**4,196**
Total education:	**14**	2	**90**
Total public relations:	**61**	0	**0**
Total:	**84**	**39**	**4,286**

Use of Core Collection

The USIO promotes outreach use of the GCR core collection by conducting tours of the repository and providing materials for display at meetings and museums. Public relations tours and educational visits to the repository are shown in the Sample Requests table above.

Legacy Documentation

Sample Request Files

In October 2010, GCR staff began scanning ODP and DSDP paper sample request files, which contain some information not included in our database. The 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.

Other Projects and Activities

Gulf Core Repository in Cotton Bowl Commercial

Scenes from the GCR featured prominently in TAMU's Cotton Bowl commercial, made available online in December 2010 (http://www.youtube.com/tamu#p/c/433F2A3727DA674E/5/19LsO8CJ83c). The core repository scenes highlight GCR facilities and IODP research.

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

No new data was merged with the cumulative Laboratory Information Management System (LIMS) database on shore during this quarter.

Log Database

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

- Expedition 327, Hole U1362A: standard and Ultrasonic Borehole Imager (UBI) data
- Expedition 329, Hole U1368F: standard and FMS data

As of 31 December 2010, USIO Expeditions 320/321, 323, and 324 and ESO Expedition 313 are in the public domain.

Expedition Data Requests

LIMS Database

Top 10 Countries Accessing LIMS Web Database*		
Rank	**Country**	**Visitor Sessions**
1	USA	142
2	Japan	67
3	United Kingdom	36
4	Germany	19
5	South Korea	7
6	France	7
7	Hong Kong	7
8	New Zealand	5
9	Spain	3
10	Australia	2
10	China	2
10	Italy	2
10	Portugal	2
10	Slovak Republic	2
10	Switzerland	2
	Others	6
	Total	**311**

*Visits by USIO-TAMU employees were filtered out.

Top LIMS Web Queries*		
Rank	**Query**	**Uploads**
1	LIMS Client	250
2	Science Data	129
3	Samples	116
	Total	495

Janus Database

Top 10 Countries Accessing Janus Web Database*		
Rank	**Country**	**Visitor Sessions**
1	USA	1,064
2	Germany	434
3	United Kingdom	355
4	Japan	194
5	China	80
6	France	73
7	The Netherlands	72
8	Canada	69
9	Western Europe	57
10	Australia	39
	Others	355
	Total	**2,792**

*Visits by USIO-TAMU employees were filtered out.

Top 20 Janus Web Queries*		
Rank	**Query**	**Uploads**
1	Imaging: photo	1,042
2	Sample	942
3	Hole trivia	507
4	Site summary	453
5	Point calc	418
6	Core summary	291
7	Hole summary	270
8	Requests	255
9	Paleo: age models	237
10	Physical properties: MSL	185
11	Leg summary	169
12	Physical properties: color data	167
13	Chemistry: carbonates	167
14	Hole summary old	146
15	Physical properties: GRA	127
16	Paleo: paleo investigation	119
17	Chemistry: rock eval	117
18	Imaging: prime data images	107
19	Physical properties: MAD	105
20	X-ray/ICP (elemental solids)	100
	Others	5,924
	Total	**7,601**

*Visits by USIO-TAMU employees were filtered out.

Other Web Statistics*		
Database query hits:		
	Entire site (successful)	13,261
	Average per day	144
Visitor sessions:		
	Total number of visitor sessions	2,792
	Average per day	30
	Average length of visit	00:10:08
	International visitor sessions	61.78%
	Visitor sessions of unknown origin	0.11%
	Visitor sessions from United States	38.11%
Visitors:		
	Unique visitors	1,666
	Visitors who only visited once	1,256
	Visitors who visited more than once	410
	Average visits per visitor	1.68

*Visits by USIO-TAMU employees were filtered out.

Data Requests to Data Librarian*	
Requests	**Total**
Country:	
United States	10
Australia	3
United Kingdom	2
France	1
Germany	1
Norway	1
Total	18
Data:	
Seismic	4
Photo requests	4
Sample data/repository visits	3
Usage and location questions of Janus, LIMS, and/or DSDP data	2
Paleo data	1
Density	1
P-wave data	1
Logging	1
XRF/ICP	1
Total	18

*Visits by USIO-TAMU employees were filtered out.

Log Database

Top 10 Countries Accessing Log Web Database*		
Rank	**Country**	**Visitor Sessions**
1	USA	418
2	Germany	125
3	United Kingdom	103
4	Japan	79
5	China	66
6	France	45
7	Australia	38
8	Canada	29
9	India	24
10	Spain	22
	All others	193
	Total	**1,142**

*Visits by USIO-LDEO employees were filtered out.

Other Log Web Statistics*		
Database query hits:		
	Entire site (successful)	7,463
	Average per day	6.56
Visitor sessions:		
	Total number of visitor sessions	1,142
	Average per day	12.45
	Average length of visit	6:26
	International visitor sessions	46.50%
	Visitor sessions of unknown origin	16.90%
	Visitor sessions from United States	36.60%
Visitors:		
	Unique visitors	722
	Visitors who only visited once	608
	Visitors who visited more than once	534
	Average visits per visitor	2.15

*Visits by USIO-LDEO employees were filtered out.

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

Program-wide Access Portal

LIMS Reports Development

Developers continued to produce new LIMS Reports and work on the report framework, while USIO Staff Scientists began conducting initial beta testing. Although the departure of one of the primary developers for this project will result in a delay in the final release, LIMS Reports remains a top priority project. Once completed, the new LIMS Reports will support drill-down access to LIMS data (see “Software Development” for more information).

Operation, Maintenance, and Security

Computer System Upgrades for the Borehole Research Group

LDEO IT staff visited Ocean Leadership on 8–10 November 2010 to install a network attached storage (NAS) unit for offsite backups of all key Borehole Research Group (BRG) data. Configuration and testing of the system were completed and nightly synchronization with the NAS at LDEO was initiated. All key BRG data now have both onsite and offsite redundant backups.

Regional Test and Integration Facility

The USIO received and rack-mounted all computer equipment for the Regional Test and Integration Facility (RITF), including servers, storage, tape backup library, and network gear. TAMU Physical Plant added additional power feeds for the HP server rack, and server operations administrators began configuring services. This project is on track for a 1 June 2011 completion date.

Software Development

LIMS Drill Down

The scope of this project is to develop a user-friendly program to enable drill-down functionality into LIMS data via the Web, similar to the Janus drill-down capability. The prototype was created and deployed for review and testing, and development of the user interface and hole summary count began. Successful completion of this project is dependent on LIMS Reports project.

LIMS Reports

The scope of this project is to develop a user-friendly program to rapidly provide specific data reports from LIMS via the Web. The program must support specific report definitions as well as example reports. This is not a replacement for Web Tabular report, but an addition to it that provides more consistent report functionality. Work continued on specific reports and on summary reports, which will be released to production by mid-February 2010.

Depth Management Reconfiguration

The scope of this project is to create tools to provide generation of additional depth models and display of those models in reports. This project must be implemented before AFFINE and SPLICE management revision project can be implemented. Progress continued on the project, with merge going well, but the expected deployment was delayed to accommodate Expedition 327 shore party user requests.

AFFINE and SPLICE Management Revision

The scope of this project is to revise the affine/splice file management and usage within LIMS to fit the new depth model being implemented and to improve the user interface and work flow. Work on development of the user interface continued this quarter.

Legacy Documentation

Development Projects

All online 20m and 100m static and dynamic images from FMS, UBI, and LWD were replaced by 50m and full interval images. This update required modification of the existing scripts (both onshore and on the ship) and extensive online checking.

Drop-modulated technology (DMT) scanned core images of ODP Legs 118, 149, 173, and 176 (in .tif and .jpeg format) were retrieved from existing CD-ROMs. More than 3,000 files were renamed to make them consistent with the existing IODP nomenclature. New documentation spreadsheets were prepared for ODP Legs 118, 149, and 173, and the existing documentation spreadsheet for Leg 176 underwent extensive revision. The final destination of the revised files has not been determined.

IODP Inventory Update

The data inventory includes data from USIO Expeditions 301–329, ESO Expeditions 302 and 310, and CDEX Expedition 314 (except hole C0003A).

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

Publication	Release Date	Digital Object Identifier	Comments
Scientific Prospectus:			
Expedition 332: NanTroSEIZE Stage 2: riserless observatory	October 2010	doi:10.2204/iodp.sp.332.2010	Edited and formatted for CDEX
Expedition 333: NanTroSEIZE Stage 2: subduction inputs 2 and heat flow	November 2010	doi:10.2204/iodp.sp.333.2010	Edited and formatted for CDEX
Expedition 335: Superfast Spreading Rate Crust 4	November 2010	doi:10.2204/iodp.sp.335.2010	
Expedition 336: Mid-Atlantic Ridge Flank Microbiology	October 2010	doi:10.2204/iodp.sp.336.2010	
Expedition 337: Deep Coalbed Biosphere off Shimokita	November 2010	doi:10.2204/iodp.sp.337.2010	Edited and formatted for CDEX
Preliminary Reports:			
Expedition 327: Juan de Fuca Ridge–Flank Hydrogeology	October 2010	doi:10.2204/iodp.pr.327.2010	
Expedition 328: Cascadia Subduction Zone ACORK Observatory	November 2010	doi:10.2204/iodp.pr.328.2010	
Proceedings of the Integrated Ocean Drilling Program:			
Volume 313			
New Jersey Shallow Shelf	4 December 2010	doi:10.2204/iodp.proc.313.2010	Edited and formatted for ESO
Volume 320/321			
Pacific Equatorial Age Transect	30 October 2010	doi:10.2204/iodp.proc.320321.2010	
Volume 322			
NanTroSEIZE Stage 2: Subduction Inputs	10 October 2010	doi:10.2204/iodp.proc.322.2010	Edited and formatted for CDEX
Volume 324			
Shatsky Rise Formation	3 November 2010	doi:10.2204/iodp.proc.324.2010	
Volume 308			
Data report: preliminary assessment of Pleistocene sediment strength in the Ursa Basin (Gulf of Mexico continental slope) from triaxial and ring shear test data	26 October 2010	doi:10.2204/iodp.proc.308.211.2010	

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 (http://www.iodp.org/program-policies/). To fulfill this obligation, scientists must 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 FY11 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	8
307	13 June 2008		4	3
311	27 June 2008		12	8
309/312	28 August 2008		9	9
310	4 November 2008		16	7
314/315/316	4 October 2010	27		11

Synthesis papers

Expedition	Submission Deadline (26 Months Postmoratorium)	Deadline Extensions Approved in FY11 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. Publications requested and distributed during the quarter are listed below.

Publication	Number Distributed
IODP Publications:	
Proceedings of the Integrated Ocean Drilling Program Expedition Report DVDs	5

IODP Publications Web Site Statistics

The IODP Publications Web site is hosted at TAMU.

FY11 Q1 IODP Publications Web Site	
Parameter	**www.iodp.org/ scientific-publications**
Page views	211,712
Site visits	67,388

IODP Digital Object Identifiers

IODP is a member of CrossRef, the official 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 2010	November 2010	December 2010	FY11 Q1 Total
IODP	10.2204	2,243	2,343	2,171	6,757
ODP/DSDP	10.2973	6,179	6,477	6,765	19,421

Publications Support

The USIO provided Publications Assistant services during USIO Expeditions 329 and 330 and hosted the postexpedition meeting for ESO Expedition 325 from 7 to 11 December 2010.

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

The USIO provides opportunities for elementary through postsecondary faculty and museum educators through onboard teacher research experiences; School of Rock programs; and workshops at conferences, museums, and other strategic venues.

Onboard Educator Program

School of Rock 2009 alumnus J. Monaco sailed as the Onboard Education Officer for Expedition 329: South Pacific Gyre. During this expedition, Monaco regularly updated the joidesresolution.org Web site with two blogs, one for older students/adults and one for children; updated the *JOIDES Resolution* Facebook and Twitter pages; and conducted 25 video broadcast events with a broad range of schools and museums.

School of Rock 2009 alumnus K. Kurtz and videographer L. Strong began their tour as the education and communications team for Expedition 330: Louisville Seamount Trail, which began in December 2010. Kurtz and Strong produced daily blogs and social media updates, conducted video events with new and innovative technology twists (integrated video and slideshows), and produced regular video updates for the *JOIDES Resolution* Facebook page and joidesresolution.org Web site.

Planning began for placing an Onboard Education Officer during Expedition 334: CRISP and a 3-person education and communications team during Expedition 335: Superfast Spreading Rate Crust 4.

School of Rock 2010

School of Rock 2010 participants began to implement a wide variety of outreach events during the quarter, including presenting a poster about the Expedition 328 experience at the AGU Fall Meeting.

Webinar Series: Human Responses to Ocean Events

The USIO partnered with the National Ocean Sciences Bowl (NOSB) to provide a webinar series for NOSB coaches and other interested educators under the heading “Human Responses to Ocean Events” (http://www.nosb.org/professional-development/). A series of 7 events was offered in early December 2010, including two given by IODP-related speakers (see “Scientists as Educators” for more information).

Educational Outreach Events

USA Science and Engineering Festival

An interactive exhibit on scientific ocean drilling was developed for the USA Science and Engineering Festival held 23 and 24 October 2010 on the National Mall in Washington, DC. Festival organizers estimated that more than 500,000 people attended the event, which was designed to inspire the next generation of scientists through interactive exhibits, stage shows, and demonstrations.

The USIO exhibit, called “Core Discoveries beneath the Sea,” used a 6-foot core replica to introduce visitors to how deep-sea sediment samples are used to understand Earth’s history. Several IODP scientists volunteered at the booth, sharing their experiences and stories about working at sea and answering questions about different career paths in Earth science.

National Science Teachers Association Conference

USIO staff participated in the National Marine Educators Association Share-a-thon at the regional National Science Teachers Association Conference held 11–13 November 2010 in Baltimore, Maryland. Core models, DVDs, and a 4-foot inflatable globe were used to highlight ocean drilling science.

American Geophysical Union Fall Meeting

Three Program-related educational posters were presented at the AGU Fall Meeting held 12–17 December 2010 in San Francisco, California. School of Rock alumni and USIO staff presented two posters titled “Deep ocean research meets the special education classroom” and “Trials at sea: successful

implementation of a unique two-month professional development program." Expedition 327 scientists also collaborated on a poster titled "The 'Adopt A Microbe' project: Web-based interactive education connected with scientific ocean drilling."

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* Web portal, 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 Web Site and Social Networking

The joidesresolution.org Web site promoted each expedition with expedition pages, blogs, videos, images, and more, and served as the hub for Program social networking on Facebook, Twitter, and YouTube sites. The second annual J/aRt contest was launched from the site during this quarter, with a deadline scheduled for FY11 Q2.

The Web site continues to show strong visitation in comparison to other science and marine science sites. The *JOIDES Resolution* Twitter page followers reached 413 and the Facebook page fan base reached 2,288, with 1,817 active monthly users and approximately 1,200 active weekly users. Both of these pages continue to grow steadily.

USIO Educational Web Site Statistics

FY11 Q1 Deep Earth Academy Web Sites*		
Web domain	**www.joidesresolution.org**	**www.oceanleadership.org/ education/deep-earth-academy**
Page views	49,908	13,732
Site visits	12,552	8,173

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

Videos and Video Broadcasts

The interest in video broadcasts continues to expand. Within a few days of posting the opportunity to interact with Expedition 329, all of the available time slots were filled. The Expedition 329 Onboard Education Officer was able to conduct 25 video events during the expedition, reaching approximately 650 students, teachers, and museum visitors (see "Onboard Educator Program" in "Professional Development" for more information).

Expedition 330 has nearly 30 video events scheduled, a number of which were conducted during this quarter. These events have received overwhelmingly positive feedback and include some new technology twists initiated by the videographer on board, including integrated video and slideshows to accompany the live segments and Q&A with scientists on board. Also among these video events are weekly broadcasts to the Auckland Museum in coordination with an exhibit on the *JOIDES Resolution* and scientific ocean drilling in general (see "Port Call Outreach" in "Outreach" for more information).

Educational Materials Development and Distribution

Materials developed this quarter included several new videos related to Expedition 330, an observation card to use with the K/T boundary core, and a revised "Intro to the *JR*" PowerPoint presentation.

Materials were distributed this quarter at conferences and outreach activities and in response to requests received through the Deep Earth Academy Web site. In addition, educational information, materials, and artifacts were provided to the Auckland Museum for a display scheduled for exhibit in the museum's Oceans Hall from early January 2011 through the end of the Expedition 330.

Scientists as Educators

The USIO provides regular opportunities for scientists to participate in educational programming. Numerous ship-based scientists participated in live ship-to-shore video broadcasts this quarter during Expeditions 329 and 330—sharing their personal science experiences and stories with students worldwide.

A number of IODP scientists participated in the October 2010 USA Science and Engineering Festival on the National Mall in Washington, DC. The scientists staffed the booth, interacting with the general public, displaying cores and microscope samples, and answering questions about the *JOIDES Resolution* and IODP expedition science.

K. St. John and M. Leckie (both IODP scientists and former School of Rock instructors) and L. Krissek (IODP scientist) conducted a workshop on Building Core Knowledge—the School of Rock–inspired curriculum for undergraduate students, at the well-attended AGU Fall Meeting in December 2010.

H. Tobin (IODP Co-Chief Scientist) and S. Mrozewski (USIO mechanical engineer) participated in the NOSB/Ocean Leadership webinar series called "Human Responses to Ocean Events" in December 2010. Tobin spoke on seismic activity in a presentation called "Earthquakes beneath the sea: understanding, early warning, and the prospects for prediction" (http://www.nosb.org/professional-development/harold-tobin/). Mrozewski spoke on responding to oil spills in a presentation called "Macondo Well Blowout: an Engineering Perspective" (http://www.nosb.org/professional-development/stefan-mrozewski/).

Strategic Partnerships

The USIO partnered with the Texas Maritime Museum in Rockport, Texas, and the Brazos Valley Museum in College Station, Texas, to work on permanent *JOIDES Resolution* exhibits that will open at both museums in the Spring of 2011.

Other activities this quarter included meeting with Earth Gauge personnel to begin developing a partnership to assist broadcast meteorologists in providing climate-related content for their broadcasts.

The USIO is also partnering with C-DEBI to support this year's version of the J/aRt contest, provide t-shirts to participants in the microbiology-related expeditions, produce the Adopt-a-Microbe projects, and develop a microbiology poster and related activities.

Outside Funding and Sponsorships

A proposal was submitted this quarter in response to NSF's Informal Science Education (ISE) Program Solicitation 10-565. This proposal is for a two-year grant for planning and exhibit development on board the *JOIDES Resolution*, working with museums and informal science programs throughout the country.

Diversity Support Initiatives

HBCU Fellowship

The HBCU Fellowship was initiated in 2005 in response to a request from NSF to develop a mechanism that would allow university and college students enrolled at HBCUs to pursue studies in earth systems sciences (or complementary fields) or to explore a broad range of careers in scientific ocean drilling and large-scale science program management. Recruitment of Fellowship applicants has been a continuous challenge since the inception of this initiative, possibly because the Fellowship is only open to students enrolled at HBCUs and very few HBCUs have Earth Science, Geosciences, or Oceanography departments. The most recent call for applications for the HBCU Fellowship resulted in numerous inquiries but an insufficient number of applications for competition. Consequently, the Spring 2011 HBCU Fellowship was cancelled.

The USIO has explored a number of mechanisms to improve the recruitment of faculty/research mentors and HBCU students in the USIO HBCU Fellowship initiative, including increased promotional efforts, more flexible application requirements, and availability of meaningful educational experiences such as opportunities to sail on board the *JOIDES Resolution* during an IODP Expedition. Despite these efforts, the level of interest in this initiative has remained low.

Therefore, the USIO will revamp its Fellowship initiative during the next quarter with changes designed to help broaden and increase the level of participation of minority groups in scientific ocean drilling, particularly groups not represented in the HBCU student population that have previously been ineligible for this opportunity:

Diversity Internship

This quarter, the USIO developed a new initiative called the Diversity Internship. This internship is open to minority undergraduate students that are enrolled full-time at (or recently graduated from) a U.S. university or college and have significant interest in the ocean and/or earth sciences. The Diversity Internship is designed to expose minority students to careers in scientific ocean drilling by providing them with a 10–12 week educational and career-building experience at one of the institutions that comprise the USIO. The internship will also highlight opportunities within IODP and science program management that may encourage students/interns to pursue advanced studies in Earth System Sciences (or complementary fields) and/or careers in scientific ocean drilling.

The first Diversity Internship will be in communications at the Ocean Leadership office starting in June 2011. The selected Intern will work closely with a mentor from the USIO communications group to conceive, develop, and disseminate new materials that help to heighten the Program's national and international visibility.

Legacy Documentation

Legacy Digital Library

Legacy preservation activities include storing electronic copies of relevant education products and materials produced by the USIO each quarter in a dedicated CMS. Products and materials archived this quarter include notes from the *JR* newsletter, videos related to Expedition 330, a revised "Intro to the *JR*" PowerPoint presentation, and the K/T boundary core observation card.

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

During the *JOIDES Resolution*'s December 2010 port call in Auckland, New Zealand, the USIO coordinated and/or provided support for multiple outreach activities in cooperation with the Australia-New Zealand IODP Consortium (ANZIC). These activities included a virtual press conference with Australian media; ship tours for approximately 120 people from the University of Auckland, GNS Science, New Zealand Ministry of Research, U.S. Consulate in Auckland, and the Auckland Museum; a VIP lunch event at the Auckland Museum for more than 100 participants; and an evening public lecture at the Auckland Museum attended by more than 120 people. Co-Chief Scientists from Expeditions 329 and 330 were featured speakers for the Auckland Museum events.

Display materials (including large graphics, IODP videos, and a core replica) were provided for an IODP exhibit in the Oceans Gallery of the Auckland Museum. Additionally, USIO staff met with museum employees during the port call to help strategize the display layout and coordinate expedition promotions for the weekly ship-to-shore broadcasts to be held at the museum during Expedition 330.

Global Outreach Activities

The USIO worked with IODP-MI to coordinate adjacent booth space and complementary content for the AGU Fall Meeting (see "Representation at Meetings/Conferences" below for more information).

Representation at Meetings/Conferences

Geological Society of America Annual Meeting

An IODP booth was included at the Exhibit Hall of the Geological Society of America (GSA) Annual Meeting held 31 October–3 November 2010 in Denver, Colorado. The booth advertised upcoming USIO expeditions and featured the DVD titled "The New *JOIDES Resolution* and Scientific Ocean Drilling in Film," which includes the Wilkes Land Glacial History Expedition 20-minute documentary.

American Geophysical Union Fall Meeting

IODP occupied one-third of the Ocean Leadership booth at the AGU Fall Meeting held 13–17 December 2010 in San Francisco, California. This year's booth featured a new graphic of photos from recent expeditions and a multimedia video loop highlighting images and video footage from the last year of operations on board the *JOIDES Resolution*. The first issue of the new newsletter for the U.S. scientific ocean drilling program, *Core Discoveries*, was distributed at the booth. Additionally, IODP scientists worked at the booth throughout the week to greet colleagues and introduce new scientists to scientific ocean drilling.

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 releases and media advisories (all items below are press releases unless noted otherwise):

- Join Deep Earth Academy at the USA Science and Engineering Festival (http://www.oceanleadership.org/2010/join-deep-earth-academy-at-the-usa-science-and-engineering-festival/) (*story for Ocean Leadership website*)
- Deep sea exploration: looking for limits to life and following the trail of "wandering hotspots" off the coast of New Zealand. (media advisory issued 6 December 2010 by IODP-New Zealand, with support from the USIO)

Communications Tools

***Core Discoveries* Newsletter:** The USIO produced and distributed the first issue of the new U.S. IODP Community newsletter, *Core Discoveries*, in December 2010. This revival of the former *JOI News* newsletter is designed to provide readers with timely updates and information on U.S. IODP activities. The primary audience for this newsletter includes the U.S. scientific community and funding agency representatives. The inaugural issue of *Core Discoveries* includes articles on recent and upcoming expeditions, a community spotlight, an article on program renewal, and letters to the community from NSF and the USIO.

The full-color *Core Discoveries* newsletter will be distributed three times per year in both print and electronic form. The newsletter is available online (http://www.oceanleadership.org/wp-content/uploads/2009/03/CoreDiscoveries_Fall2010_FinalDraft.pdf), and printed copies can be requested from Ocean Leadership (IODPCommunications@oceanleadership.org).

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).

- **Gamage, K**., Screaton, E., Bekins, B., and Aiello, I., 2010. Permeability–porosity relationships of subduction zone sediments. *Mar. Geol.*, 279(1–4):19–36. doi:10.1016/j.margeo.2010.10.010

News Articles, Programs, Media Citations, or Public Commentary

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

- *Discover Magazine*, 2010. Life found in the deepest, unexplored layer of the Earth's crust. *discovermagazine.com*, 19 November 2010. http://blogs.discovermagazine.com/80beats/2010/11/19/life-found-in-the-deepest-unexplored-layer-of-the-earths-crust/
- Goldstein, A., 2010. Smoky Hill teacher: adventure has a place in learning. *Aurora Sentinel*, 14 October 2010. http://www.aurorasentinel.com/education/article_72aca7c6-d7c8-11df-a85b-001cc4c002e0.html
- Hesterman, D., 2010. Bering Sea was ice-free and full of life during last warm period, study finds. *UCSC University News*, 13 December 2010. http://news.ucsc.edu/2010/12/ravelo.html?utm_medium=rss
- Long, D., 2010. The Real School of Rock: Cayuga Community College geospatial researcher helps international project. *HighBeam.com*, 4 November 2010. http://blog.syracuse.com/neighbors/2010/11/the_real_school_of_rock_cayuga_community_college_geospatial_researcher_helps_international_project.html
- *Martinsville Daily*, 2010. Virginia Museum of Natural History to host distinguished lecture, school and teacher workshops. *martinsvilledaily.com*, 14 December 2010. http://martinsvilledaily.com/?p=119
- Neale, I., 2010. Half of life could be hidden undersea. *stuff.co.nz*, 13 December 2010. http://www.stuff.co.nz/environment/4452859/Half-of-life-could-be-hidden-undersea
- NZResources.com, 2010. Louisville Seamount Chain quest ship to berth in Auckland. *nzresources.com*, 12 December 2010. http://nzresources.com/showarticle.aspx?id=1644&gid=30001644
- *Physorg.com*, 2010. Extreme global warming in the ancient past. *physorg.com*, 10 November 2010. http://www.physorg.com/news/2010-11-extreme-global-ancient.html
- *Salisbury Post*, 2010. South Rowan students tour marine research vessel via Skype. salisburypost.com, 22 November 2010. http://www.salisburypost.com/News/112510-edu-skyping-PIC-qcd
- *Science*Daily, 2010. Busy microbial world discovered in deepest ocean crust ever explored. *ScienceDaily.com*, 19 November 2010. http://www.sciencedaily.com/releases/2010/11/101119162926.htm
- *Scoop Sci-Tech Independent News*, 2010. Deep sea exploration: looking for limits to life. *scoop.co.nz*, 6 December 2010. http://www.scoop.co.nz/stories/SC1012/S00019/deep-sea-exploration-looking-for-limits-to-life.htm

- *The Wilson Post,* 2010. Local teacher returns from research expedition in Pacific Ocean. *Wilson Post,* October 2010.
- Thomas, A., 2010. Ocean may contain nuclear powered microbes. *ABC Science,* 14 December 2010. http://www.abc.net.au/science/articles/2010/12/14/3092876.htm
- *U.S. News Science,* 2010. Busy microbial world discovered in deepest ocean crust ever explored. usnews.com, 23 November 2010. http://www.usnews.com/science/articles/2010/11/23/busy-microbial-world-discovered-in-deepest-ocean-crust-ever-explored?s_cid=rss:busy-microbial-world-discovered-in-deepest-ocean-crust-ever-explored
- Voll, K., 2010. Cross-country connection. *Auburnpub.com,* 25 October 2010. http://auburnpub.com/lifestyles/article_96434080-dfd6-11df-800c-001cc4c002e0.html

Communications Training

During the Auckland port call in December 2010, USIO staff provided one-on-one communications training to Expedition 329 Co-Chief Scientist S. D'Hondt to help him prepare for Australian and New Zealand press interviews and a public lecture to be given in Auckland. Specific instructions were also provided to communications colleagues in Australia and New Zealand, as well as the Co-Chief Scientists of Expeditions 320 and 330, regarding the press embargo policies of the *Science* and *Nature* publications.

Legacy Documentation

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, IODP brochures, Fall 2010 *Core Discovery* newsletter, news articles related to IODP expeditions, and the multimedia video loop created for the AGU Fall meeting.

Other Projects and Activities

In November 2010, USIO staff members attended an NSF-sponsored science communications workshop entitled "Science: Becoming the Messenger," held at George Washington University in Washington, DC. USIO participants learned to craft a message and deliver it to a variety of media outlets, experienced live interview training, developed writing and new media skills, honed their public presentations, and even produced video. USIO staff also learned more about NSF's diverse set of resources for public outreach through a valuable session with representatives of NSF's Office of Legislative and Public Affairs.

APPENDIX A: FINANCE REPORT

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

APPENDIX B: TRAVEL

Purpose*	Category	Dates	Location	Institution: Personnel
Expedition 336 Planning Meeting	Planning	4 October 2010	College Station, Texas	TAMU: C.G. Wheat
Radiation Safety Training	Training	7–13 October 2010	Papeete, Tahiti	TAMU: D. Menchaca
Expedition 329 Education and Communications Activities	Education/ Outreach	9 October–13 December 2010	Papeete, Tahiti	Ocean Leadership: J. Monaco (Onboard Education Officer)
Management Training	Training	12–16 October 2010	San Francisco, California	TAMU: P. Rumford
Manuscript Editing Course	Training	13–17 October 2010	Chicago, Illinois	TAMU: E. O'Roke
Data Management Coordinating Group (DMCG) Meeting	SAS	18–21 October 2010	Newark, New Jersey	Ocean Leadership: D. Divins TAMU: P. Foster, R. Mithal, J. Rosser
Java Learning Tree Training	Training	18–23 October 2010	New York	TAMU: J. Zhao
International Association of Information Technologies (IAITAM) Conference	Training	19–23 October 2010	Nashville, Tennessee	TAMU: D. Ponzio
USA Science and Engineering Festival	Education/ Outreach	23 and 24 October 2010	Washington, DC	TAMU: J. Geldmacher, C. Peng Other: K. St. John
LabView Training	Training	24–29 October 2010	Austin, Texas	TAMU: T. Blaisdell
Cascadia 2012 Planning Meeting	Planning	24–29 October 2010	La Jolla, California	TAMU: K. Grigar, K. Petronotis, M. Storms
University-National Oceanographic Laboratory System (UNOLS) Meeting	Conference Representation	25–27 October 2010	San Diego, California	Ocean Leadership: D. Divins
Annual and Quarterly Report Planning and meetings	Reporting	26 October–9 November 2010	College Station, Texas	TAMU: G. Lowe
Meeting with NOV Tuboscope	Vendor Meeting	27 and 28 October 2010	Amelia, Louisiana	TAMU: B. Aduddell
Managing/Supervising People Course	Training	27 and 28 October 2010	College Station, Texas	TAMU: J. Pagliai (Instructor)
Geological Society of America (GSA) Meeting	Conference Representation	29 October–3 November 2010	Denver, Colorado	Ocean Leadership: K. Ludwig TAMU: M. Malone
Offshore Communications Conference	Training	1–4 November 2010	Houston, Texas	TAMU: P. Gates
American Management Association (AMA) Training Course	Training	7–14 November 2010	New York, New York	TAMU: L. Miles

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

Purpose*	Category	Dates	Location	Institution: Personnel
Network-Attached Storage (NAS) Installaion	Data Management	8–10 November 2010	Washington, DC	LDEO: T. Baker, D. Quoidbach
Site Safety and Environmental Protection (SSEP) Meeting	SAS	8–13 November 2010	Portland, Oregon	LDEO: A. Slagle TAMU: J. Geldmacher, K. Petronotis
Meeting with Exxon-Mobil	Vendor Meeting	9 November 2010	Houston, Texas	TAMU: B. Clement
Meetings with Panalpina, Mainfreight, and UTI	Vendor Meetings	9–11 November 2010	Houston, Texas	TAMU: T. Brashear, S. Dillard, R. Mitchell
Continuing Education Training	Training	9–12 November 2010	San Antonio, Texas	TAMU: W. Wasson
Corporate Travel Conference	Training	9–12 November 2010	New Orleans, Louisiana	TAMRF: K. Bass
International Association of Drilling Contractors (IADC) Annual General Meeting	Conference Representation	10–12 November 2010	San Antonio, Texas	Ocean Leadership: G. Myers
HR Certification Preparation Course	Training	14–17 November 2010	Dallas, Texas	TAMU: K. Johnson
Global Knowledge Training	Training	14–20 November 2010	New York	TAMU: G. Banta
USIO System Integration Team Meeting	Planning	17 and 18 November 2010	Palisades, New York	Ocean Leadership: D. Divins, R. Gagosian TAMU: B. Clement, K. Miller
IADC Underbalanced Operations and Managed Pressure Drilling Committee Quarterly Meeting	Conference Representation	6–9 December 2010	Reading, United Kingdom	Ocean Leadership: G. Myers
Expedition 330 Port Call Assistance	Outreach	11–14 December 2010	Auckland, New Zealand	Ocean Leadership: S. Saunders TAMU: B. Julson, M. Malone, J. Miller, R. Mitchell, D. Partain, J. Rosser
Hewlett Packard Enterprise Virtual Array (EVA) Training	Training	12–18 December 2010	Cupertino, California	TAMU: M. Cannon

Purpose*	Category	Dates	Location	Institution: Personnel
American Geophysical Union (AGU) Fall Meeting	Conference Representation	12–18 December 2010	San Francisco, California	Ocean Leadership: S. Cooper, D. Divins, J. Farver, D. Fils, R. Gagosian, K. Ludwig, L. Peart† LDEO: C. Brenner, D. Goldberg, G. Guerin, G. Iturrino, D. Quoidbach, M. Reagan, A. Slagle, T. Williams TAMU: P. Blum, B. Clement, J. Firth Other (Leicester University): S. Davies, S. Morgan
Expedition 330 Education and Communications Activities	Education/ Outreach	13 December 2010– 12 February 2011	Auckland, New Zealand	Ocean Leadership: K. Kurtz (Onboard Education Officer), L. Strong (videographer)
Tool testing—motion-decoupled hydraulic delivery system (MDHDS) project	Engineering Support	17–21 December 2010	Houston, Texas	LDEO: G. Iturrino

APPENDIX C: USIO QUARTERLY REPORT DISTRIBUTION

J. Allan, NSF, jallan@nsf.gov
R. Batiza, NSF, rbatiza@nsf.gov
M. Rouse, NSF, mrouse@nsf.gov
J. Emmitte, IODP-MI, jemmitte@iodp.org
K. Suyehiro, IODP-MI, ksuyehiro@iodp.org
D. Divins, Ocean Leadership, ddivins@oceanleadership.org
R. Gagosian, Ocean Leadership, rgagosian@oceanleadership.org
J. Hubler, Ocean Leadership, jhubler@oceanleadership.org
M. Morell, Ocean Leadership, mmorell@oceanleadership.org
G. Myers, Ocean Leadership, gmyers@oceanleadership.org
Y. Xing, Ocean Leadership, yxing@oceanleadership.org
D. Goldberg, LDEO, goldberg@ldeo.columbia.edu
D. Grames, LDEO, grames@ldeo.columbia.edu
M. Purdy, LDEO, purdy@ldeo.columbia.edu
M. Reagan, LDEO, reagan@ldeo.columbia.edu
M. Respo, LDEO, mrespo@admin.ldeo.columbia.edu
B. Clement, TAMU, clement@iodp.tamu.edu
S. Garrett, TAMRF, srg@rf-mail.tamu.edu
B. Lancaster, TAMRF, lancaster@iodp.tamu.edu
M. Malone, TAMU: malone@iodp.tamu.edu
K. Miller, TAMU, kcmiller@tamu.edu
L. Schulze, TAMRF, schulze@iodp.tamu.edu
W. Wasson, TAMU, wasson@iodp.tamu.edu