

Cruise Planning Questionnaire

AR07-01 Irminger Sea

Ship

RV Neil Armstrong

Vehicles

Cruise Party

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Departure: Woods Hole MA on Jun 30, 2016

Arrival: Reyjavik on Jul 28, 2016

Mobilization Date: Jun 27, 2016

Demobilization Date: Jul 30, 2016

Supporting documentation:

Operations Area: Southeast of Greenland

Lat/Lon: 59° 52.0? N / 39° 30.0? W

Depth Range: 2600 / 2800

Will the vessel be operating within 200 NM of a foreign country? no

Science objectives

To carry out the recovery and redeployment of the NSF Ocean Observatories Initiative (OOI) Irminger Sea Array, servicing four moorings and up to four gliders. The platforms will carry multidisciplinary instrumentation and provide the capability for real time communication of data and control of sampling. A surface mooring will instrument the sea surface and upper ocean, capturing the surface forcing and upper ocean variability. A profiling mooring will measure through the water column.

Two additional taut subsurface moorings and the gliders will complete the capabilities to obtain vertical profiles and sample the mesoscale (10s to 100 km) variability at the site.

Science Activities

The following activities are planned: 1) Validate the bathymetry of the site to check the planned positions for the four moorings of the second deployment; 2) Deploy the four new moorings; 3) Recover the four moorings deployed in 2015; 4) Deploy up to four gliders in support of horizontal and vertical sampling in and around the array; 5) Recover one glider deployed in 2015; and 6) Carry out shipboard sampling in support of calibration and validation of the deployed sensors on the moorings and gliders and to add to knowledge of the site.

Pre-cruise planning meeting: Visit WHOI

June 10 if possible

Media personnel on board: none

Stations:

Funding Agency: NSF #OOI 1234

- added NSF #OOI 1234 on Jun 3, 2016 4:47 PM by Eric Benway

R/V Armstrong

Shipboard Equipment

Bathymetry System 12 kHz

ADCP 300 kHz

Bathymetry System 3.5 kHz

ADCP 150 kHz

A-Frame

Deionized Water System

Navigation - Position

12 kHz Pinger for Wire Use

Knudsen SBP

Navigation - Heading

EM122 Multibeam Echosounder

EK80 Sonar
Computer Network
Crane
DP System
POS-MV
ADCP 38 kHz

Shipboard Communication

Basic Internet access via HiSeasNet

CTD/Water Sampling

911+ Rosette 24-position, 10-liter bottle Rosette with dual T/C sensors
Wet Labs FLNTURTD Combination Fluorometer and Turbidity Sensor

Critical CTD Sensors:

Hydrographic Analysis Equipment

Oxygen Sample Bottles (available in 150 ml sizes)
Salinometer
Dissolved Oxygen Titration System (Brinkmann Titrator)
Salt Bottles (2 cases of 125 ml provided)

MET Sensors

Barometric Pressure
Air temperature
Precipitation
Relative Humidity
Wind speed and direction
Short Wave Solar Radiation

Sample Storage

Freezer -70°C 3.2 cu. ft. ea.

Storage Notes: Need to keep samples on board until Armstrong returns to WHOI Sept 14.

Navigation

Will you be using Long Base Line (LBL) navigation? no

Will you be using Ultra-short baseline (USBL) navigation for other than Alvin operations? no

Navigation Notes:

Winches

Mooring / TSE winch
CTD Winch with .322" Electro-mechanical wire

Winch Notes: OOI will bring our own Lebus winch (self spooling) and have reserved a TSE winch spooler from east coast winch pool (Brian Guest).

We will bring a portable generator to power our Lebus winch. (John Kemp).

Wire use and application

Trawl Winch with 9/16th trawl wire

Wire Notes: 9/16 trawl only if we need to drag.

Slip ring required? no

Number of conductors:

Non-standard wire required? no

Type:

Traction winch required? no

Describe:

Other Science Vans:

Other Science Vans:

Science Van 1

Type/size: Ball Van (8x20)

Location: main deck

Water: no

Power: no

Science Van 2

Type/size: Rigging Van (8x20)

Location: Main Deck

Water: no

Power:yes

Specialized Deck Equipment

Mooring Deployment/Recovery Equipment Required: yes Type: Vans, Lebus, TSE, tuggers

Cruise Specific Science Winch Required: no Type:

Nets Required: no Type:

Over the Side Equipment

Will you be bringing any equipment (winches, blocks, etc.) that lowers instruments over the side? yes

Details: OOI will supply winches, blocks hooks, tuggers and extra poles.

Special Requirements

Electrical Power: yes Identify: Winches and van

Equipment Handling: no Identify:

Inter/intraship Communications: no Identify:

Science Stowage: yes Identify: samples after cruise and some boxes in hold

Water: no Identify:

Additional Cruise Items/Activities

Explosive Devices: no Small Boat Operations: no

Portable Air Compressors: no SCUBA Diving Operations: no

Flammable Gases: no

Hazardous Material

Will hazardous material be utilized? yes

Describe deployment method and quantity:

Lithium batteries for gliders. O2 Titrator and Salt chems. Small nitrogen tank (Eric Benway will supply Hazmat inventory sheet).

Radioactive Material

Radioisotopes: no

Additional Information

Is night time work anticipated on this cruise? yes

Specialized tech support (Seabeam, coring, other): survey work and possible CTD. All mooring ops to be done in daylight.

Other required equipment and special needs:

Date Submitted: Not Submitted

Questions? Troubles? Please email cruiseplanning@whoi.edu