



Dr. John Toole KN218
Pre-Cruise Meeting 3/28/14
Agenda Items

Mission Objectives:

Line W Finale is one component of a long-term climate observing system that is positioned to quantify variability in the deep limb of the Atlantic meridional overturning circulation (MOC). The field program has been operating since 2004 and includes a 6-element array of instruments situated down the continental slope south of Woods Hole and is augmented by yearly occupations of a hydrographic section along this line extending toward Bermuda. The moored array, which utilizes McLane profilers, current meters plus T/C sensors, is designed to quantify changes in DWBC / Gulf Stream water properties, stratification (potential vorticity) and transport. Shipboard observations using CTD, LADCP and discrete sampling for salinity, oxygen, CFCs, SF₆ and I¹²⁹ measure the water column properties at high spatial resolution to help verify that the array resolves interannual signals. These measurements are key to clarifying the deep ocean response to variability in high-latitude air-sea exchanges and, ultimately, the ocean's role in global climate variability through changes in its transport of heat and freshwater.

Science Activities

- Recover 6 subsurface moorings. - no moorings are getting redeployed. This cruise is the end of Line W.
- Conduct 26 full-depth CTD/rosette casts.

Agenda Items:

1. Chief Scientist:

John Toole: Chief Scientist, Principal Investigator
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2. Identify operating area:

West Atlantic Lat/Lon: 40° 18.0' N / 70° 6.0' W
Depth Range: 40 / 5300

3. Voyage Info:

NUMBER: KN218
MOB: 29 Apr 2014 (WHOI)
DEPARTURE: 01 May 2014
ARRIVAL: 12 May 2014 (WHOI)
DEMOB END: 13 May 2014

4. Schedule:
 - Science can move aboard 30 April
 - Science can stay on board night of 12-May

5. Science party (size) : _____
SUBMIT PERSONNEL FORMS NO LATER THAN April 13th 2014

Pre-cruise and Administrative:

1. Diplomatic clearance requirements for operations in EEZs: Yes
Bermuda
2. Financial responsibility: WHOI Project Number
3. Personnel forms
4. Berthing Plan: male & female ratio
5. Any Special Food Requirements (Kosher, Allergy, Vegetarian, etc)
- ~~6. Customs forms 4455~~

Instrumentation & Technician Support :

1. **General Duties of Marine Technician :**
 SSSG Technicians – x2
 WHOI sssg techs do not stand watches. But are available 24/7 to train and to assist in operations.

2. **WHOI general use equipment required for cruise :**

Acoustics:

- 12 kHz Pinger for Wire Use
- ADCP 75 kHz
- Bathymetry System 12 kHz
- Bathymetry System 3.5 kHz
- Lowered Acoustic Doppler Current Profiler (LADCP)

Other:

- Uncontaminated Seawater System
- Deionized Water System
- TSE , ship's crane, poles/hook
- blocks for mooring work (Sci Party Provided)

Communications:

Basic Internet access via HiSeasNet

Water Sampling

CTD/Water Sampling

911+ Rosette 24-position, 10-liter bottle Rosette with dual T/C sensors

SBE43 oxygen sensor

Seapoint STM turbidity sensor (if available, but not critical)

Wet Labs C*Star transmissometer (660nm wavelength) (if available, but not critical)

Wet Labs ECO-AFL fluorometer (if available, but not critical)

Hydrographic Analysis Equipment

Oxygen Sample Bottles (available in 150 ml sizes)

Salinometer

Salt Bottles (2 cases of 125 ml provided)

Dissolved Oxygen Titration System (Brinkmann Titrator)

*Dave Wellwood will be our hydrographer on the cruise. I trust he will bring what we need (i.e., sufficient trays of sample bottles)

Winches:

CTD Winch with .322" Electro-mechanical wire

Mooring / TSE winch

Sample Storage:

Freezer -70°C 3.2 cu. ft. ea.

Met/Wx Sensors

Air temperature

Barometric Pressure

Relative Humidity

Wind speed and direction

Precipitation

Short Wave Solar Radiation

Special Electrical Power Requirement

VANS: x1 Ragtop container

3. Lab use and lab layouts:

To be submitted by Science party

Ship [Other Requirements][Shipboard Equipment/Nav] :

1. Science/Ship Operations :
 - a. Instrument Deployment / Recovery Procedures:
 - b. Over boarding Equipment (ISM)
 - c. Vans: 1
 - d. Night Operations: YES

2. Deck Safety – Safety Shoes
3. Lab Safety – PPE

4. Hazardous Material: Yes
Identify material: (Oxygen pickling chemicals, GC's for CFC analyses)

5. Policies: (speed, departure/arrival times, moving aboard, etc.)
11kts

6. Communication (voice, fax, e-mail)

Logistics [Notes]

1. Shipping gear to and from vessel
 - a. How much?

 - b. US Customs (forms and AMS): NO

 - c. Berthing plan:
32 bunks available.

 - d. Use of ship's agent or local facilities (financial responsibility)

Post-Cruise:

1. Actions departing ship
2. UNOLS cruise evaluation [Chief Scientist & Master]
3. Reports to foreign government/State Department [required for work in EEZs]
4. Data delivery [shipboard] USB Hard drive.
5. Data archiving policy
All data on a WHOI Cruise Data Distribution (which includes all underway data) will, by default be considered publicly available once a copy of it has been

delivered to the chief scientist at the end of the cruise. Please review the [Cruise Assignment of Data Access Protection](#)

As of January 1, 2011, the default treatment for underway data from Woods Hole Oceanographic Institution (WHOI) research vessels is:

1. Cruise data files are copied by a WHOI SSSG Technician to the distribution media. One copy is delivered to the cruise Chief Scientist, the other is delivered to WHOI's Data Library and Archives. Please note that the distribution of cruise data to other scientist is the responsibility of the Chief Scientist.

2. The **default** access status for the cruise instrument datasets is that they will be immediately accessible by

the public. If something other than this default protection is desired, the Chief Scientist must assign alternate protection as indicated below. For cruises funded by the National Science Foundation ,the maximum protection is two years, for non-NFS cruises, other guidelines may apply.

3. WHOI maintains a local copy of the cruise shipboard data distribution at its Data Library and Archives, which also honors access moratorium periods. If the cruise Chief Scientist wishes to modify the data protection assignments made in this pre-cruise document upon cruise completion, they should contact the

WHOI Data Library and Archives at dla@whoi.edu, or the SSSG Data Manager at sssgdatamgr@whoi.edu