Pre-Cruise Meeting 1400 Eastern Time (1100 Pacific), July 1, 2015

Cruise:
AT30-02 / Craig Lee, Davis Straits. Sept 6 – Sept 25, 2015.
Vessel: RV Atlantis

General Program Overview:

1. Scientific Objectives:

As part of a coordinated international effort to quantify (and eventually monitor) the variability of fluxes connecting the Arctic and Atlantic Oceans and to understand the role played by the Arctic and sub-Arctic in steering decadal scale climate variability, an integrated observing system will provide year-round measurements of volume, liquid freshwater and ice fluxes across Davis Strait. Fluxes through the Strait represent the net integrated Canadian Archipelago throughflow, modified by terrestrial inputs and oceanic processes during its southward transit through Baffin Bay. By the time they reach Davis Strait, Arctic waters already embody most of the transformations they undergo prior to exerting their influence on the deep-water formation sites in the Labrador Sea. This makes the Strait an ideal site for monitoring temporal and spatial variability in the critical upstream boundary condition for Labrador Sea convection. Measurements at Davis Strait will be used to study how fluctuations in the Arctic freshwater system modulate deep water formation to the south, thus influencing the associated meridional overturning circulation (MOC).

Activities:

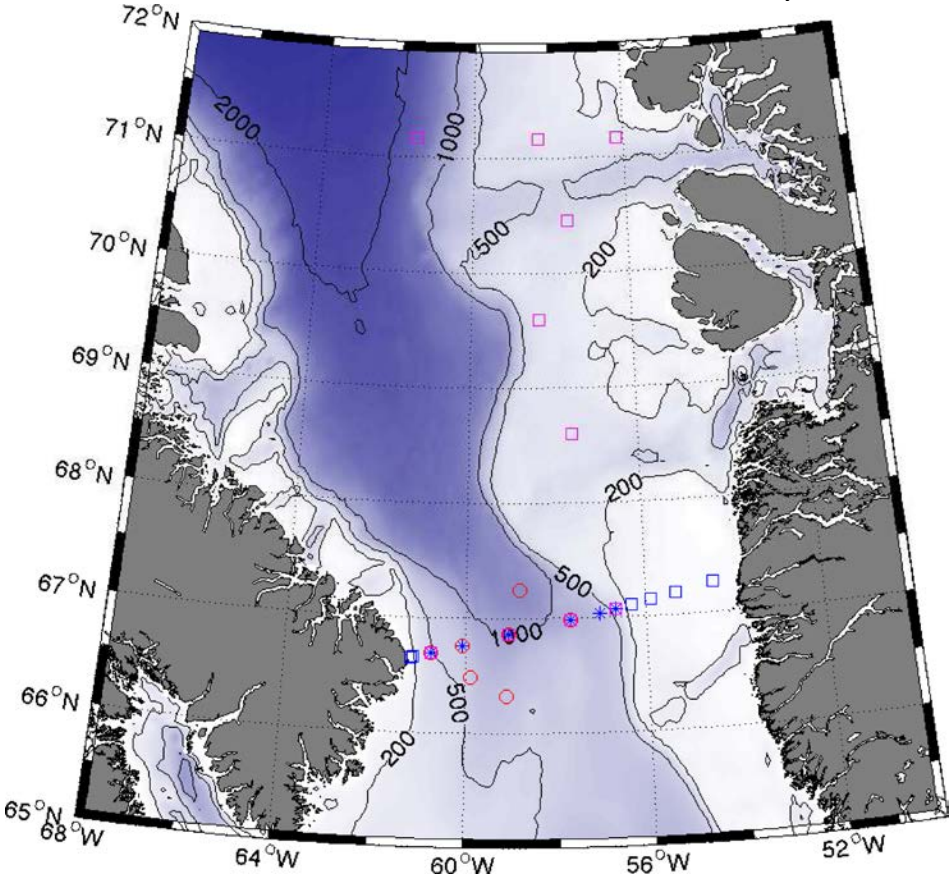
The following activities are planned:

1. Service mooring array (15 elements deployed across Davis Strait).
2. Conduct extensive hydrographic survey extending from the northern Labrador Sea into southern Baffin Bay
3. Marine mammal observations
4. (tentative) Deploy long-range glider at Davis Strait

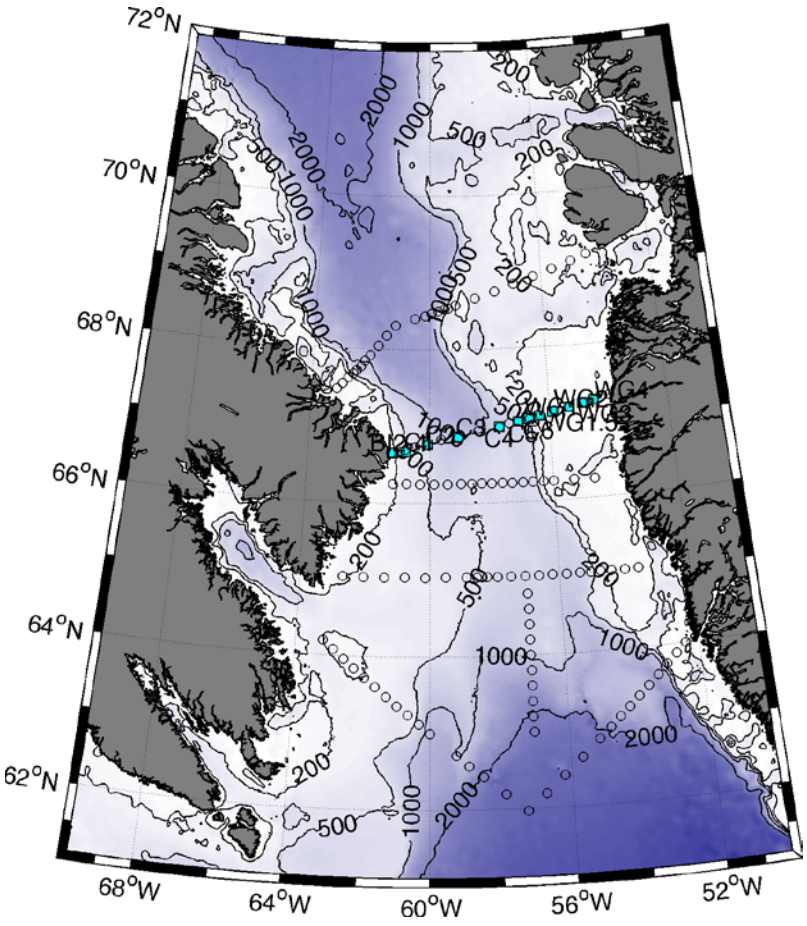
2. Identify other PIs associated with the cruise:
   Craig Lee, Dave Hebert, _____

3. Identify the at-sea Chief Scientist:
   Craig Lee

4. Identify operating area (See cruise synopsis for details):
   Northern Labrador Sea to Southern Baffin Bay



Blue squares and magenta circles mark the locations of the Davis Strait mooring array. Magenta squares in the northern portion of the Chart mark the positions of Greenland Institute of Natural Resources moorings that will be deployed as part of this cruise.



Black circles mark the locations of CTD stations that have been routinely occupied since 2004. Time permitting, we intend to sample these station as part of the 2011 cruise.

Depth range; 50 - 3000 meters

5. Voyage Dates and Leg #: **Sept 6 to Sept 25, 2015 / AT30-02**
    - Start Port: Nuuk
    - Mid Cruise personnel transfer Sisimuit* tbd.
      How many people? Date?
    - End Port: Nuuk
    - Pre Load WHOI July 29 – August 3
    - Mobe Nuuk Sept 3, 4 & 5. Mobile Shore Crane.
    - Science can move aboard Sept 4th.
    - Demobe Nuuk: Sept 25 & 26
    - Demobe WHOI October 4, 5 & 6
    - Shore crane req. for mobes and demobes.
    - US Customs forms due to Eric by July 31st.

6. Science party (size) –
   (32 bunks available for science party)

Pre-cruise and Administrative:

1. **Diplomatic clearance** requirements for operations in EEZs:
   Greenland (Denmark) – applied 4/30/15

2. **Financial responsibility**: PO for UW APL $9,000 for shore cranes and logistics. All shore crane costs and forklift will be split with OOI and Davis Straits. (For port / loading & logistical expenses)
   Other PO's to set up? UVic?

3. **Personnel forms** (Passports, Drivers License, Visas, Entry Fees)
   - Personnel forms req. 1 month prior to cruise.
   - We will need list for foreign collaborators if any.

4. Any Special Food Requirements (Gluten Free, Vegetarian, Kosher, etc.)

5. **Berthing Plan** - 1 week prior to mobilization; http://www.whoi.edu/page.do?pid=822

6. Lab Layout plan:
   http://www.whoi.edu/main/ships/atlantis/lab-science-spaces

RV ATLANTIS Instrumentation & Technician Support
[Installed Scientific Equipment]

1. General Duties of Marine Technicians (SSSG techs). Each tech works a 12 hr shift. Techs will train science team w/ CTD deployments & recoveries.

2. SSSG Technicians on cruise: **Dave Sims, Tina Thomas**

3. WHOI general use equipment required for cruise ***[Installed Scientific Equipment]*:**

    A. CTD rosette w/ dual T/C Sensors
    - Underwater Par 1000m, SBE O2 sensor,Wet Labs ECO-AFL Fluorometer, Wet Labs C*Star Transmissometer.

    B. Di H2O – how much / day?
    C. 12 kHz Bathy
    D. ADCP 75kHz
    E. ADCP 300kHz
    F. Multibeam EM 122 - generate maps? NO
    G. Fume Hood
    H. Sci Underway Seawater Sys.
    I. High Seas Net – normal activity
    J. Navigation position / heading readouts.
    K. Met Sensors – **all.**
    L. Sample storage - 70 C; 3.2 c/ft freezers.
    M. Walk-in Freezer
    N. -70C ; 25 cu ft freezer
    O. Refrigerator 8.6 cu ft
    P. Stern plate guard

Science Party Supplied Equipment:

A. TSE mooring winch (Winch Pool)
B. 1 - 20 foot Storage Van – Main Deck port side (20,000lbs)
C. Gliders – #?
D. Anchor stacks - 6 w/ 5 wheels each @ 4,500 ea stack.
E. Seven 41" spheres
F. Multinet – 5.6 meters total height (~19') for deployment off .322 and stbd crane. Top part weights 200lbs & Cod End is 150 lbs (net in between).
G. Bio Chemical analytical equipment in labs and sci hold.

Ship [Other Requirements] [Shipboard Equipment/Nav]

1. Science / Ship Operations
    a. Instrument Deployment / Recovery Procedures:
    CTD ops, Mooring Ops, Glider Ops & Multinet ops (10?)

    b. Overboarding Equipment: .322 Winch and Hydroboom, A Frame, Stbd Crane, TSE winch

    BLOCK?

    c. Vans: **1 C. Lee storage van Main deck** @ ~20,000lbs
    d. OOI will have 2 vans on 01 deck other gear stowed out of the way.
    e. Hazards: [weight, bulk, chemical, pres.] Types?
    LI Primary Lithium batteries (moored instruments, gliders)

    f. Night Operations: **YES. Gliders & CTD ops Multinets at night.**

2. Deck Safety – Safety Shoes (X), Experience (X)
    a. Science personnel have Training/Experience to operate/deploy gear
3. Lab Safety – PPE (X), Lab Training (X)
4. Hazardous Material- Please Fill out HAZMAT INVENTORY FORM

http://www.whoi.edu/sbl/liteSite.do?litesiteid=7092&articleId=10875

    a. Chemicals & Compressed Gases?
        i. Inventory Form
        ii. Spill Kit
        iii. Loading and waste removal logistics

    b. Isotope Use **[Isotope Use Approval]** – Sealed Source.
    Location in lab?

http://ehs.whoi.edu/ehs/DesktopDefault.aspx?tabindex=2&tabid=5&itemID=543

5. Policies: (speed, departure/arrival times, moving aboard, etc
6. Ship Navigation
7. Communication (voice, fax, e-mail)
8. Equipment
    a. Cranes (X)
    b. Oceanographic winches: Hydro ( ), Trawl ( ),
    c. CTD (X)
    d. Electrical power (X)

Logistics:

PLEASE COPY ERIC BENWAY ON ALL COMMUNICATIONS WITH OUR AGENTS

WHOI Agent:
Master R/V *ATLANTIS*
Attn: *Scientist's Name – Voy: AT30-02*
c/o WHOI
266 Woods Hole Rd.
Woods Hole, MA 02543

Contact: Eric Benway
Phone: (508) 289-3770
Fax: (508) 457-2185
Email: ebenway@whoi.edu

Greenland (Nuuk)

Master R/V *ATLANTIS*
Attn: Scientist Name; Voy: AT30-02
c/o Royal Arctic Logistics
Aqqusinersauq 52, PO Box 1629
3900 Nuuk
Greenland

Contact: Gorm Diernisse
Contact: John Kjaer
Phone: 299 349281, 299 349280
Fax: 299 322450
Cell: 299 523818, 24/h cell 299 555650

Email: portagent@ral.gl, god@ral.gl, jok@ral.gl

Note: Agent and WHOI contacts should be copied on all communications. It is requested that shipment information of any equipment be communicated to the Agent and WHOI contacts

Post-Cruise:

1. Actions departing ship. **LABELING** all items left behind and properly packed. Please make arrangements with Eric Benway prior to leaving items on board.
2. UNOLS cruise evaluation [Chief Scientist & Master] – UNOLS PCA.
3. Reports to foreign government/State Department [required for work in EEZs]- Preliminary Report for Denmark.
4. Data delivery [shipboard underway data].
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