



TEACHERS AND RESEARCHERS  
EXPLORING AND COLLABORATING

# Welcome to *PolarConnect*

with Chantelle Rose and the Winter  
Sampling 2011 PolarTREC Expedition

**Wednesday 7 December 2011**

9:00 am AKST

(10:00am PST, 11:00am MST, 12:00pm CST, 1:00pm EST)



# WELCOME TO WIMBA



## ARCTIC RESEARCH CONSORTIUM OF THE UNITED STATES

Raise your hand to ask a question

List of all participants

Return to the lobby or exit

Slides will be shown here

If using VOIP, press and hold here to talk

Your connection strength

'Chat' with one person or the entire group

The screenshot shows the Wimba interface with several key elements highlighted by red circles and arrows:

- Connection Strength:** A green bar graph icon in the toolbar.
- Talk:** A button labeled "TALK" in the toolbar.
- Chat:** A button with a speech bubble icon in the toolbar.
- Participants List:** A window titled "People (3)" listing participants: Kristin\_Timm, kristina\_creek, and Kristin Timm.
- Exit - Lobby:** A button in the bottom right corner of the interface.
- Chat Input:** A text input field with "To: Main Room" selected.

**Please note:**

- Participant using the telephone can mute/unmute by pressing \*6 on the phone.
- Today's event will be recorded and archived.

# Participant Introductions

**When called, please state your:**

- ✓ Name
- ✓ School / Institution
- ✓ The number of students and adults participating with you in the same location

# What is PolarTREC?

PolarTREC is a professional development experience in which K-12 teachers are paired with researchers for 2-6 week research experiences in the polar regions.

From 2010-2013, nearly 50 teachers from around the United States will join scientists in the Arctic and Antarctica to learn about science, the polar regions, and to share what they have learned with their students and communities.

# Winter Sampling - The Team



**Dr. Carin Ashjian, Woods Hole  
Oceanographic Institution**



**Bob Campbell, University of Rhode Island**



**Steve Okkonen, University of  
Alaska, Fairbanks**



**Celia Gelfman,  
University of Rhode Island**



**Joel Llopiz, Woods Hole  
Oceanographic Institution**



**Donna Van Kueren,  
University of Rhode  
Island**



**Phil Alatalo, Woods Hole  
Oceanographic Institute**



**Kristina Terpis,  
University of Rhode Island**



**Chad McLaren, National Ice Center**



**David Leech, University of Alaska**



**Krista Longnecker, Woods Hole Oceanographic Institution**



**Sam Laney, Woods Hole Oceanographic Institution**



**Steve Roberts, UCAR**



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**David Pavlik, US Fish and Wildlife**



**Eric Arnesen, Oregon State University**



**Dean Stockwell, University of Alaska**



**Toby Martin, Oregon State University**

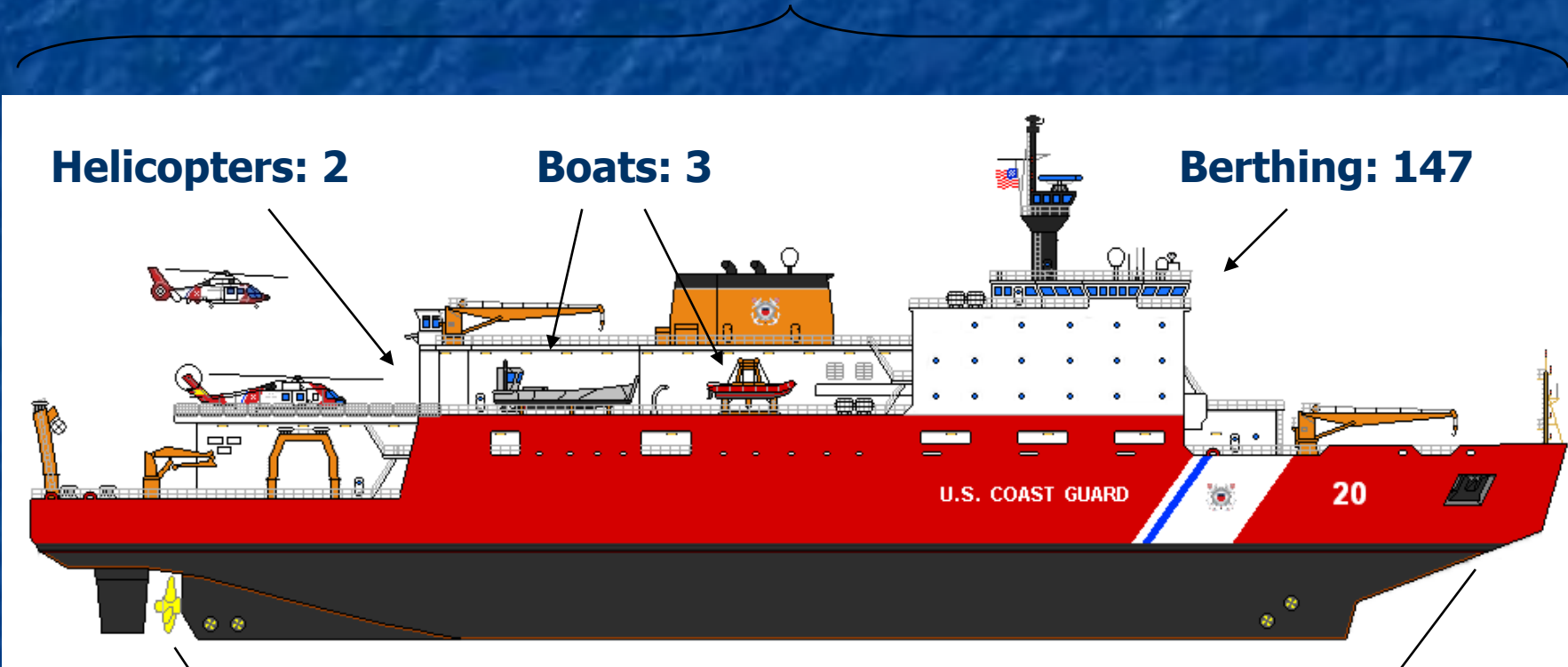


# Captain of the USCGC Cutter Healy, Captain Beverly Havlik and Executive Officer Commander Gregory Tlapa



# HEALY statistics

Length: 420 ft



Helicopters: 2

Boats: 3

Berthing: 147

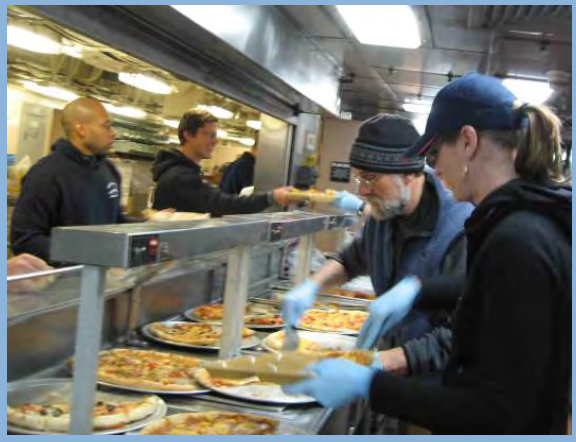
Height:  
135 ft

Draft:  
30 ft

Fastest Speed: 17 kts

Icebreaking: 4.5 ft at 3 kts  
8 ft Backing & Ramming

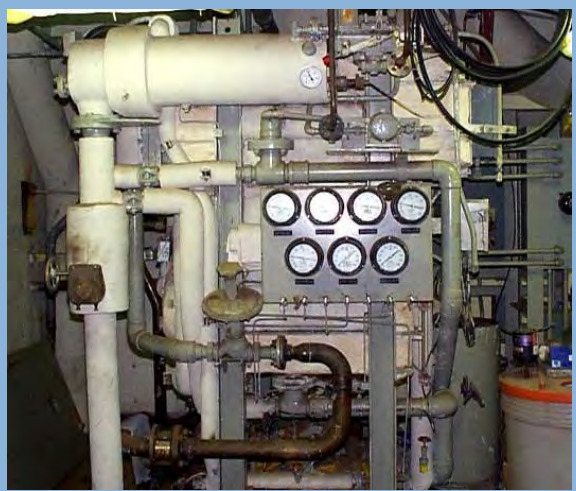
Weight: 16,000 long tons (36 million pounds)



Mess deck

Store

Sick Bay



Water plant



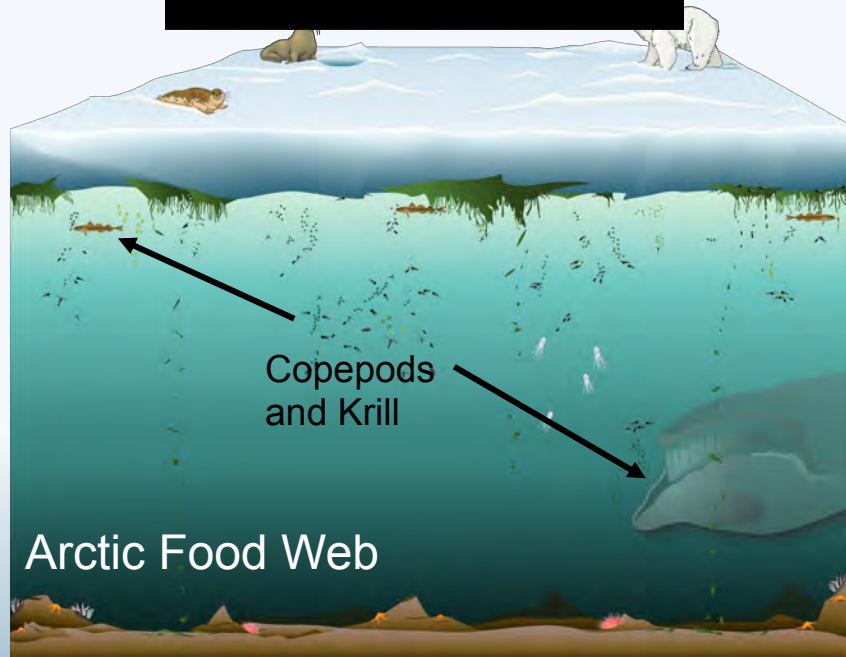
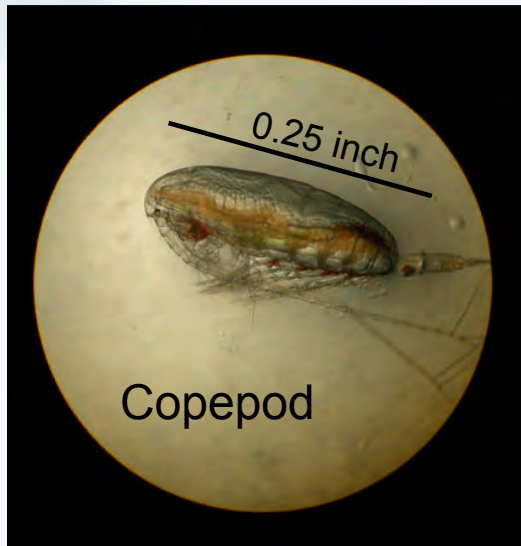
Power plant



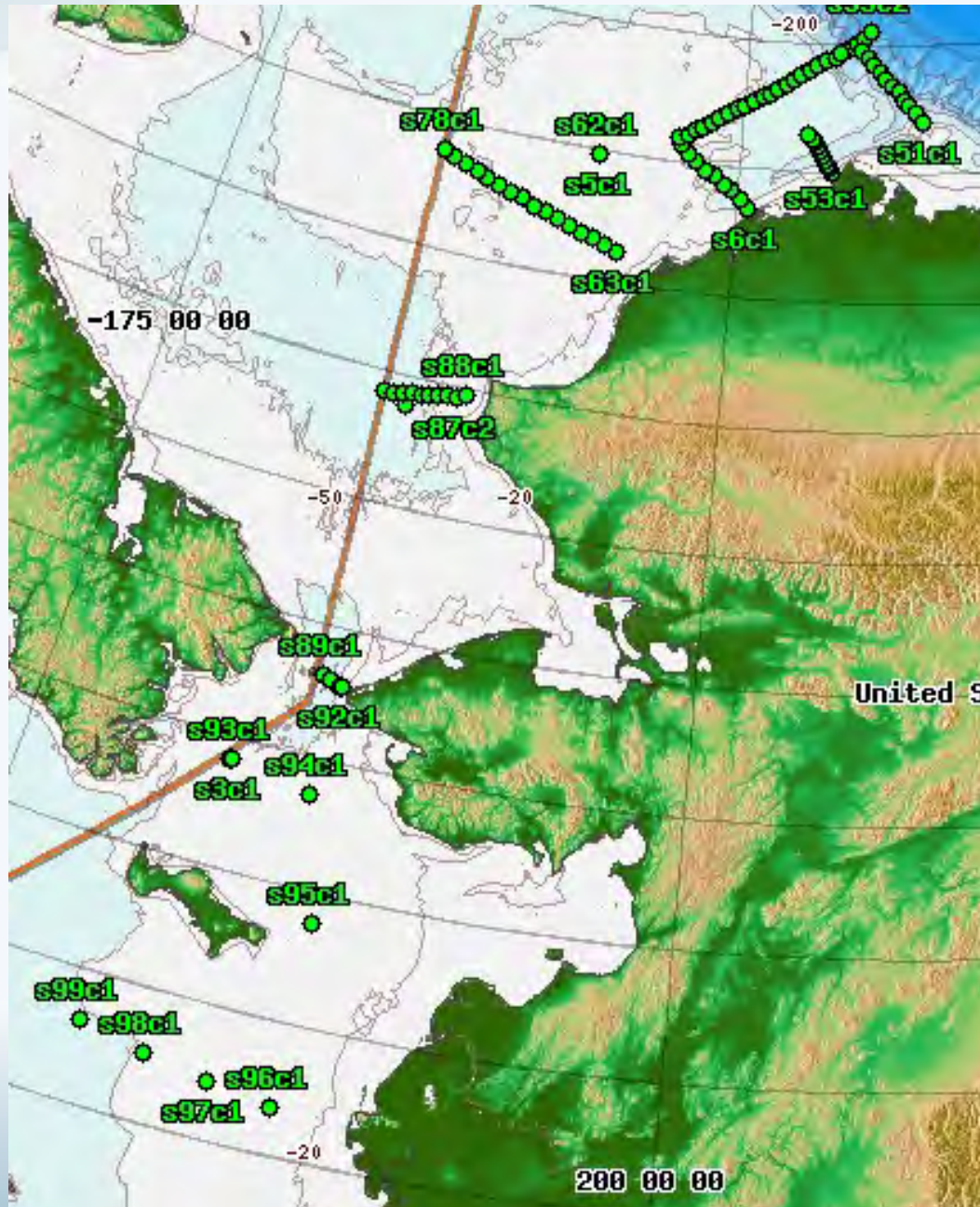
HEALY: A floating city

# Why go to the Arctic in Winter?

- We know very little about the biology and physical oceanography of the Bering and Chukchi Seas in winter.
- We are particularly interested in the large copepods *Calanus* and krill – where are they during the winter? In other regions, these animals spend the winter in deeper water – deeper than the Chukchi and Bering shelves.
- Our poor understanding of the winter ecology of these animals hampers our ability to predict and model the impact of climate change in the Arctic ecosystem.



# Where we have been so far



# Achievements so far

Through December 3

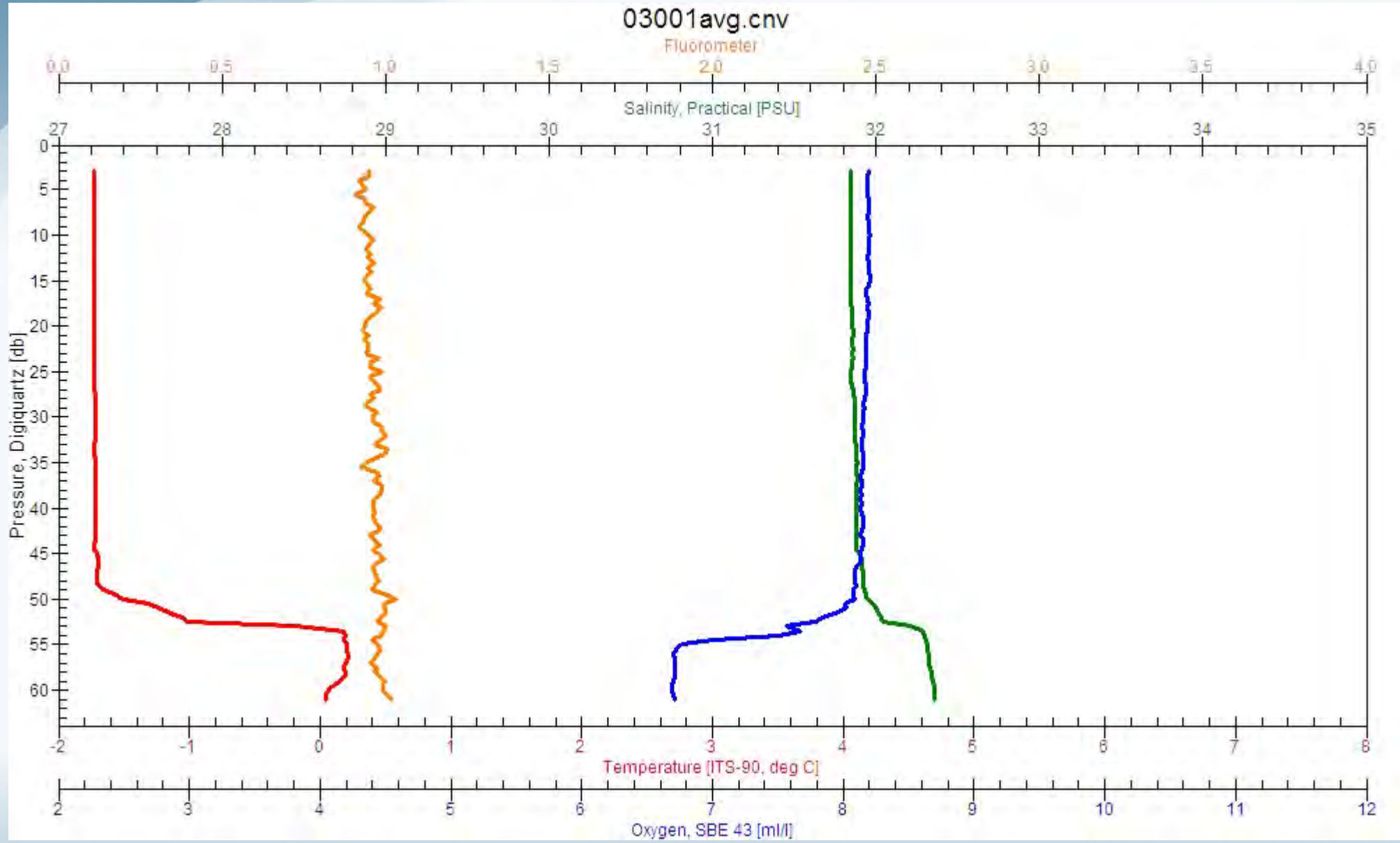
	Number
Stations	99
Events (e.g., CTD, VPR, Bongo)	321
CTD Casts	100
VPR Casts	89
Bongo Tows	60
Ring Net Tows	47
Ice Collections	14
Multinet Tows	10
Mooring Deployments	1

# What We Have Been Sampling

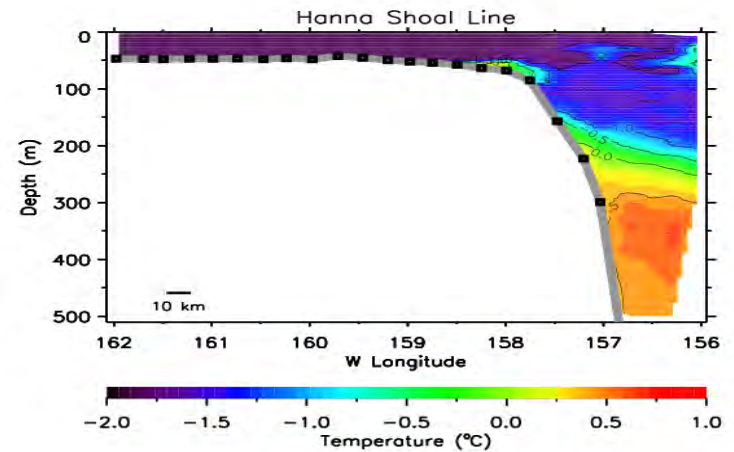
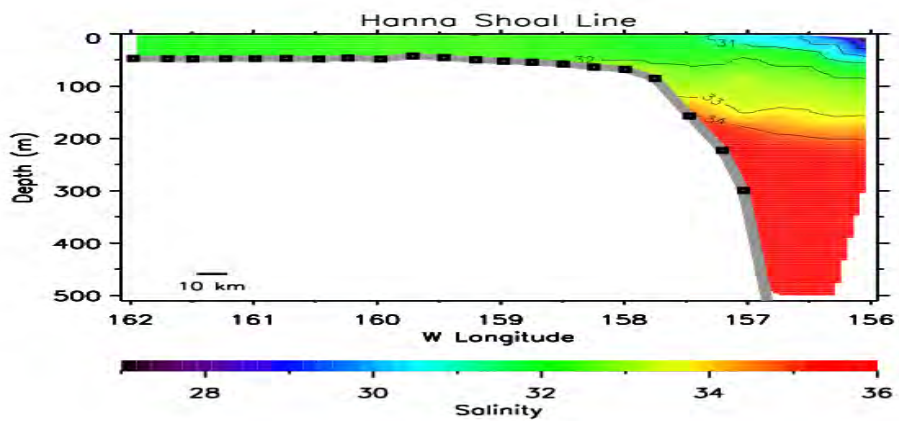
- Water temperature, saltness, temperature and currents
- Chlorophyll (phytoplankton), microzooplankton and zooplankton (Calanus copepods, krill abundances)
- Bird and Mammal distributions
- Dissolved Organic Matter
- As well as conducting some experiments with the animals we have collected







# Hannah Shoal Salinity and Temperature

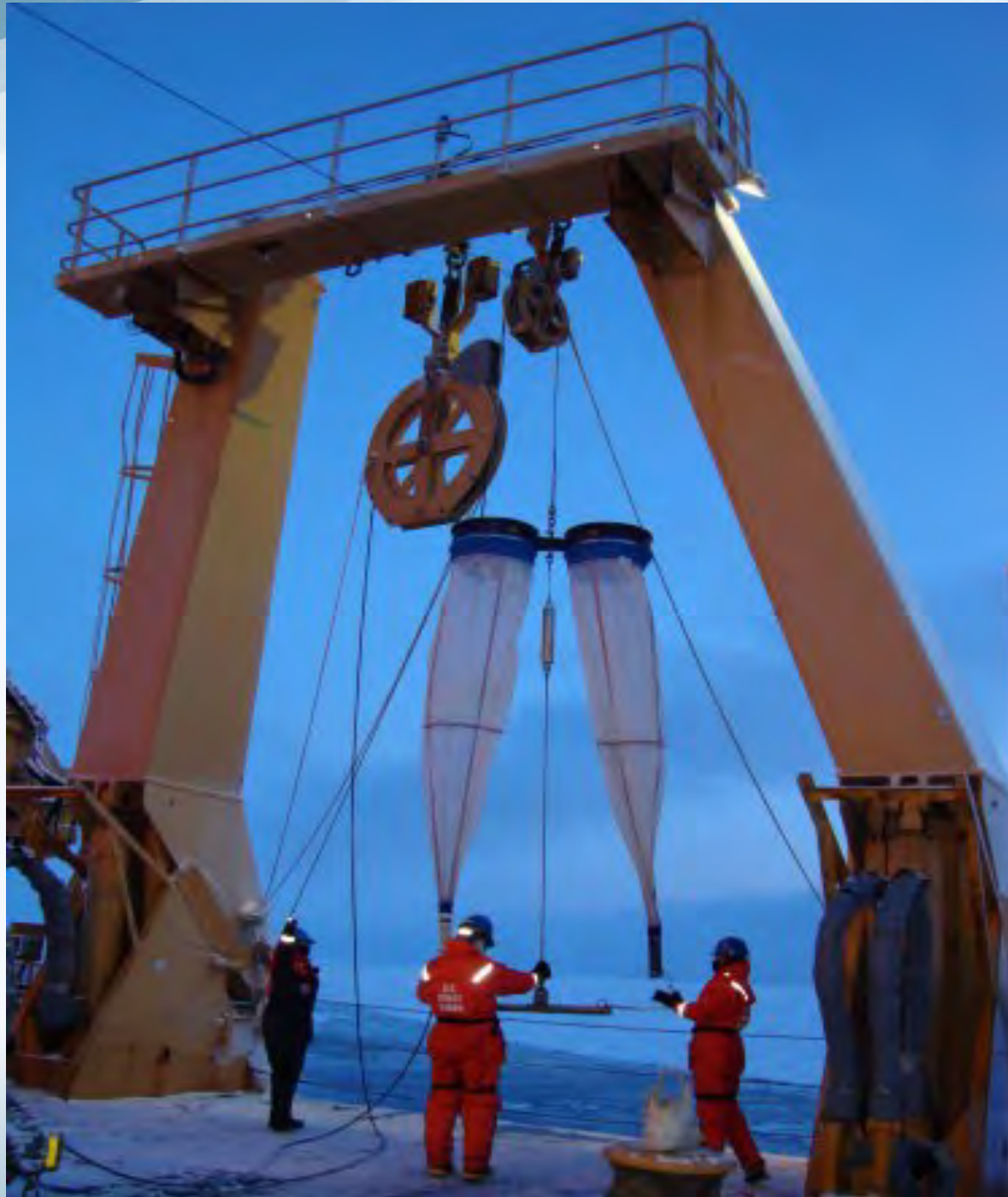


# Samples from the Nisken Bottles

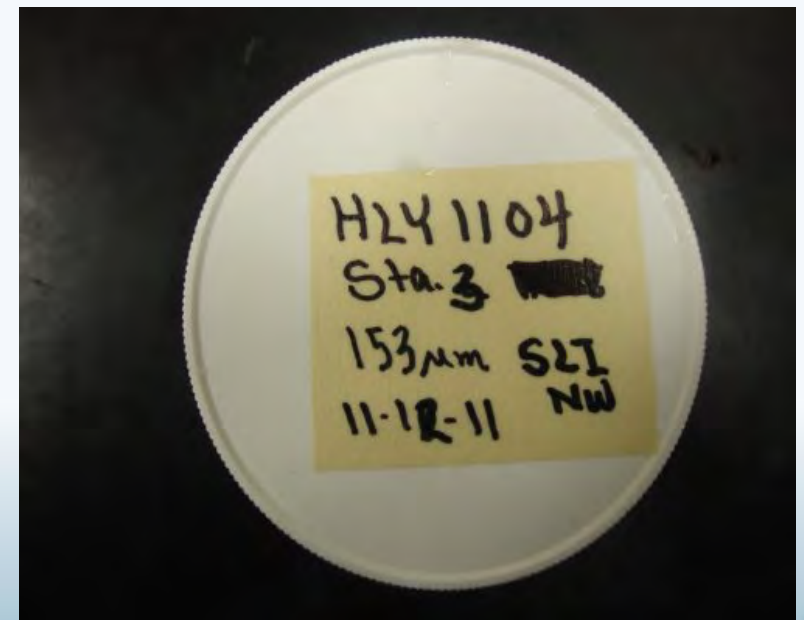


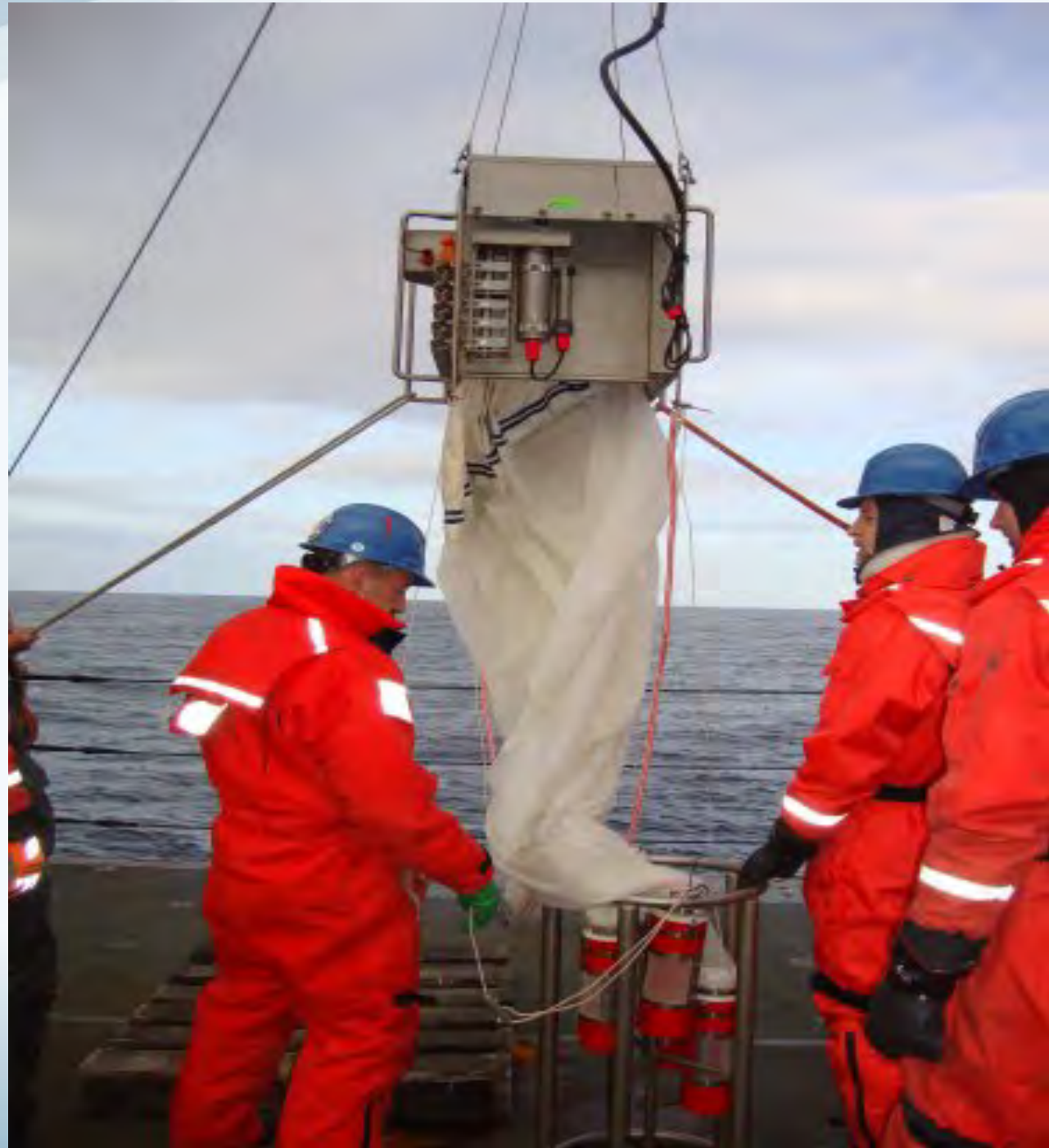






# Bongo Net Samples











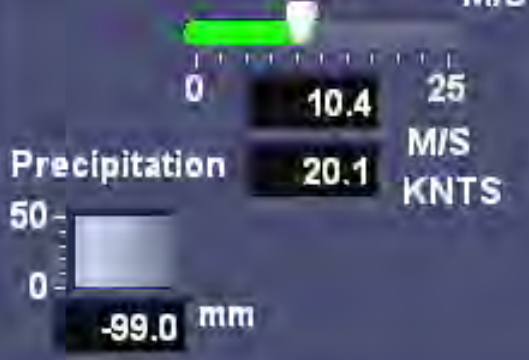


# Density Experiment with Polystyrene





GPS 06:31:04  
 LAT 72 18.749N  
 LON 155 57.233W  
 COG 253.9  
 SOG 0.7  
 Gyro 256.4  
 Depth Sndr 1023.0



1009.3 millibars  
 Barometric Prs (Sea Level)  
 1012.5

Wind Chill  
 -40.02 C  
 -40.04 F  
 Valid if Wind > 3 KNTS and Air Temp < 10C

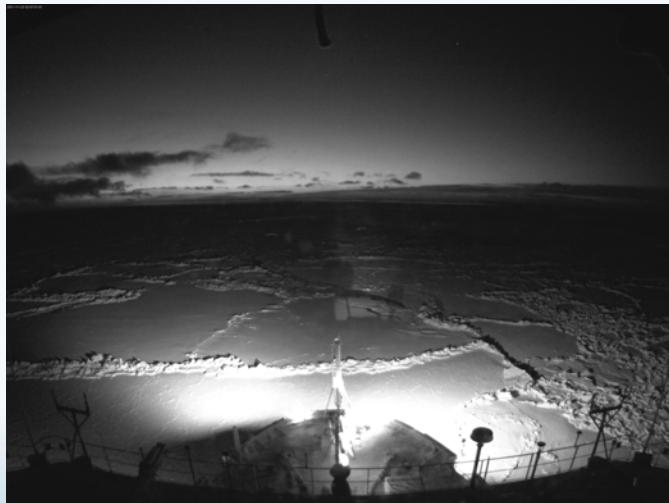
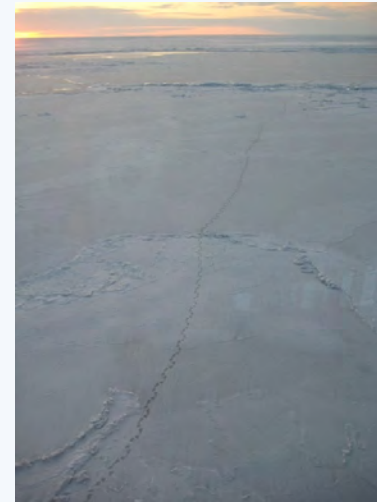
Mon 21-Nov-11 06:31:03

Air Temp	-24.9	PAR	3.2	Sea Temp	-1.55
Baro Pres	1009.3	SWR W/M2	0.0	TSG Temp	-1.28
BaroP SL	1012.5	LWR W/M2	277.5	Salinity PSU	29.45
Rel Humidity	71.7	BP Temp	-17.0	Snd Velocity	1435.66
Dew Pt	-28.05	EM122	INOP	Oxy Sat	8.62
Brdg_AirTemp	-24.15	Knudsen	1023.0	Oxygen m/l	7.866
Bow RelWD	135.0	PCO2	324.8	Fluromtr ug/l	0.2
Rel WS KTS	19.6			Flow LPM	2.6
				Prs PSI	22.3
Mid RelWS M/s	7.9			Winch MTR	10
Mid RelWD	138.4			Winch MPM	0
Mid TrueWS M/s	8.2	Mid TrueWS M/s	9.4	Tension LBS	-30
Mid TrueWD	36.5	Mid TrueWD	38.1		

# Animals of Special Interest



# Other Interesting Sights





# Questions

## To Ask a Question:

- ✓ Raise your hand with the “hand button”
- ✓ Type your question in the text chat box
- ✓ Speak loud and clear and directly into the phone to ask your question.



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# Teachers: Join PolarTREC!

[www.polartrec.com/about/join](http://www.polartrec.com/about/join)

Every teacher can participate in different ways:

- **Following Expeditions**
- **Participate in PolarConnect Events**
- **Join the Polar Education Email List**
- **Take Online Professional Development Courses**
- **Become a PolarTREC Teacher!**

# Upcoming Events

Watch for and register for upcoming events at [www.polartrac.com](http://www.polartrac.com)!

Join Michelle Brown for a **PolarConnect** event on  
Friday, 9 December 2011

8:45am AKST

[9:45am PST, 10:45am MST, 11:45am CST, 12:45am EST]

# Thank You!

*An archive of the event will be available shortly.*

<http://www.polarartrec.com/polar-connect/archive>

