

*Welcome to:*

***Live from IPY!***

*With PolarTREC Teachers, Robin  
Ellwood & Cameo Slaybaugh*

*From McMurdo Station, Antarctica*

**What's Under the Ice?**

**AUV's and ROV's in Antarctica**

*24 November 2008*

**Live from IPY! participants:** If you are using the phone to join the audio portion of the event, please dial 1-800-315-6338 and when prompted, enter the code 78732#.



# Welcome to HorizonWimba



Arctic Research Consortium of the United States

List of all participants

Raise your hand to ask a question

Return to the lobby or exit

Slides will be shown here

If using VOIP, press here to talk

'Chat' with one person or the entire group

The screenshot shows a Wimba webinar interface. At the top, a slide reads "Welcome to HorizonWimba" with the ARCUS logo and "Arctic Research Consortium of the United States" below it. A toolbar contains a "TALK" button, microphone, video, and other icons. A chat window at the bottom left shows a conversation. On the right, a "People (3)" list shows participants: Janet\_Warburton, ronnie, and tina. At the bottom right, a navigation bar includes "Exit - Lobby - Help" and the ARCUS logo. Red circles highlight the "TALK" button, the chat window, the "People" list, and the "Exit - Lobby - Help" menu. Arrows point from text labels to these elements.

**Please note:** Today's event will be recorded and archived at [www.polartrec.com](http://www.polartrec.com).



## ***What is PolarTREC?***



PolarTREC is a professional development experience in which K-12 teachers are paired with researchers in authentic polar research experiences.

In the next three years over 40 teachers from around the United States will join scientists in the Arctic and Antarctica in celebration of the International Polar Year!

***[www.polartrec.com](http://www.polartrec.com)***

# The PolarTREC Team



**Wendy Warnick**  
PolarTREC PI  
Executive Director



**Helen Wiggins**  
Program Coordinator



**Janet Warburton**  
PolarTREC  
Project Manager



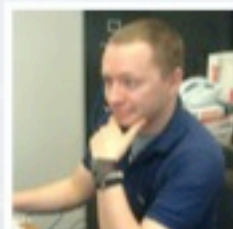
**Kristin Timm**  
PolarTREC  
Project Manager



**Ronnie Owens**  
Web Developer



**Ben Wade**  
Web Developer



**Zeb Polly**  
Systems Administrator



**Joed Polly**  
Video Production

...with help from the  
entire staff at ARCUS





# *International Polar Year (IPY)*



The International Polar Year (2007-2009) is an exciting scientific campaign focusing on the world's polar regions!

IPY is a time for discovery, science, learning, and awareness about the polar regions with activities for youth, scientists, and the public.

***[www.ipy.org](http://www.ipy.org)***



375 mi





Antarctic Digital Coastline: Antarctic Digital Database, 2000  
US Digital Outline: ESRI

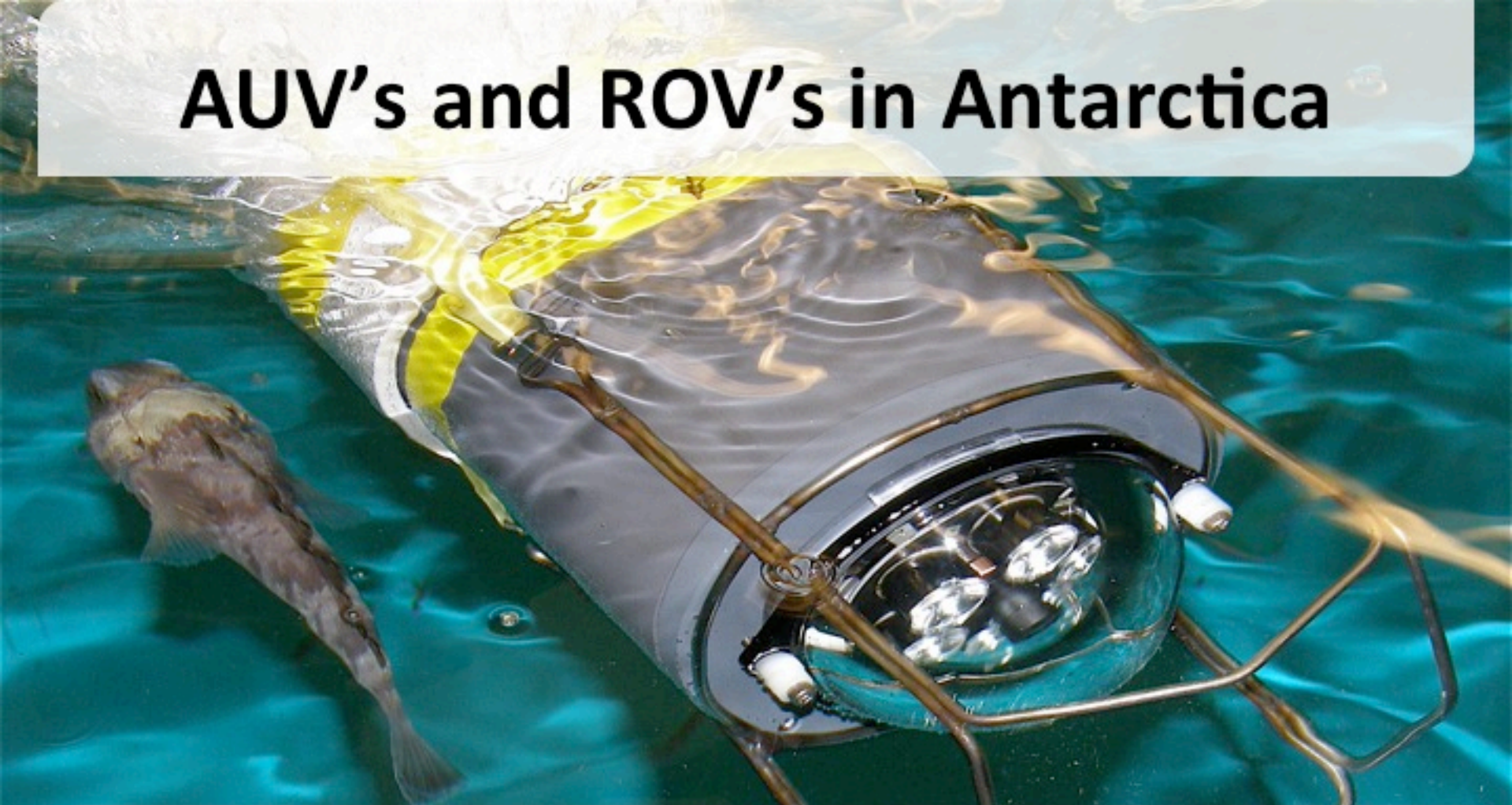


# McMurdo Station





# AUV's and ROV's in Antarctica



presented by

Dr. Peter Doran, Dr. Stacy Kim, Robin Ellwood, Cameo Slaybaugh, the ENDURANCE team, and the SCINI team





Shilpa Bob Vicky Peter Annika Bill Robin Chris Bart Kristoff Maciej

# The ENDURANCE Team





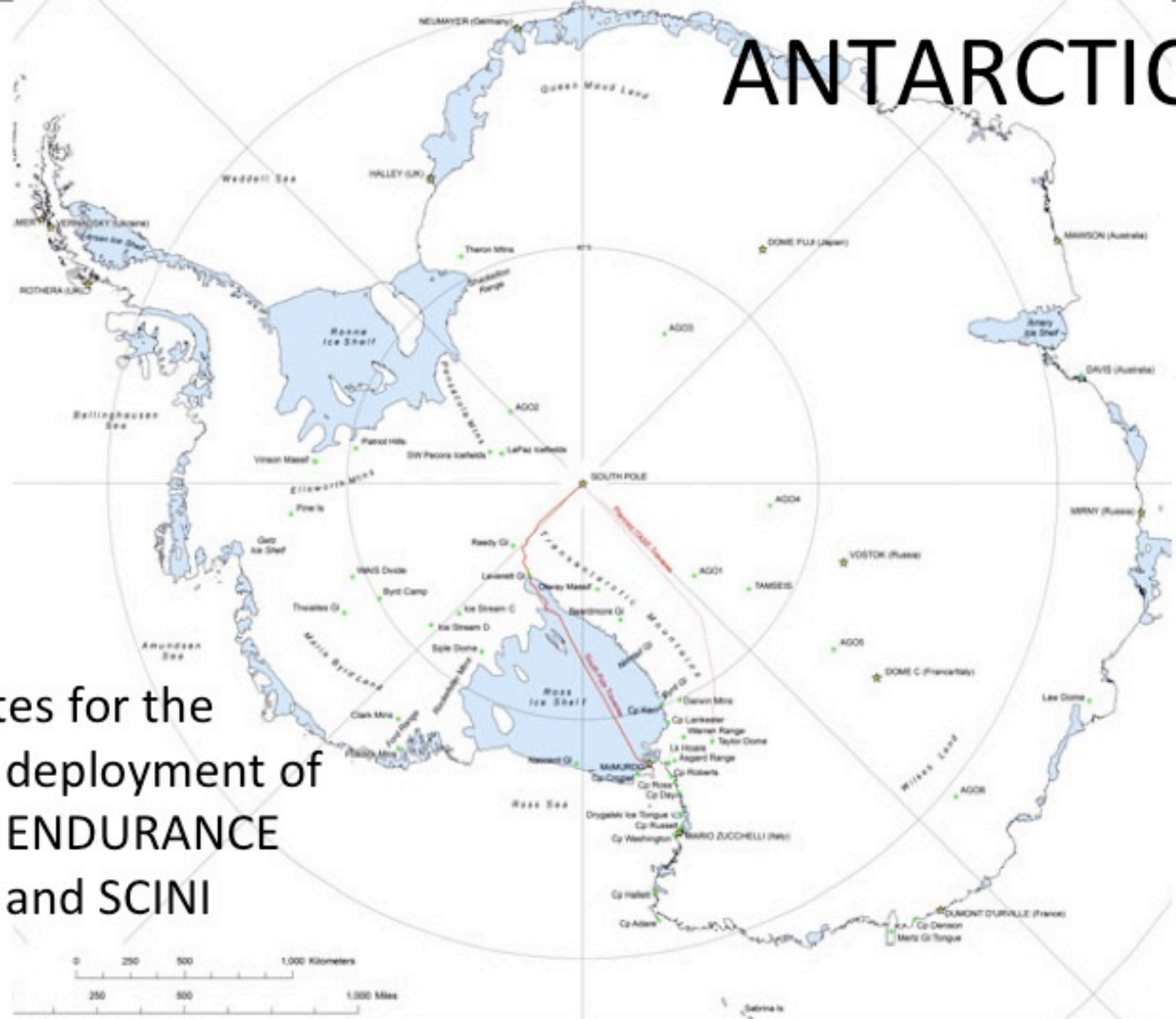
## The SCINI Team

front row : Dr. Stacy Kim, Francois Cazenave, Marco Flagg

back row : Cameo Slaybaugh, Bob Zook, Scott Heesch, Jim O'Sullivan, DJ Osborne

# ANTARCTICA

Sites for the  
deployment of  
ENDURANCE  
and SCINI

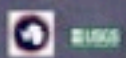




# Sites for the deployment of ENDURANCE and SCINI



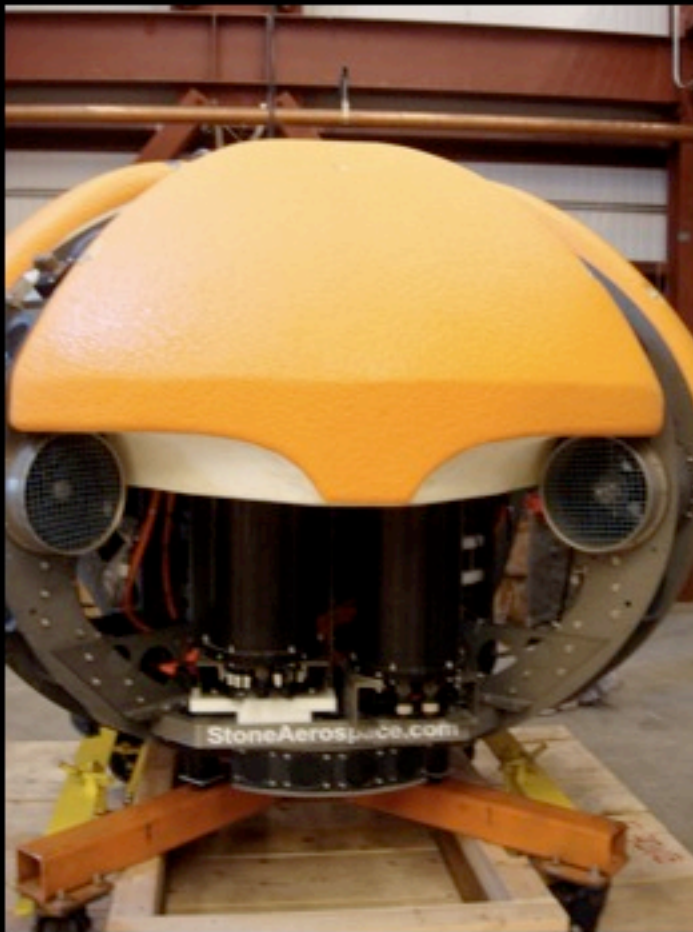
Ross Island and Dry Valleys Overview





# ENDURANCE

(Environmentally Non-Disturbing  
Under-ice Robotic ANtarctic Explorer)



AUV or Autonomous Underwater Vehicle

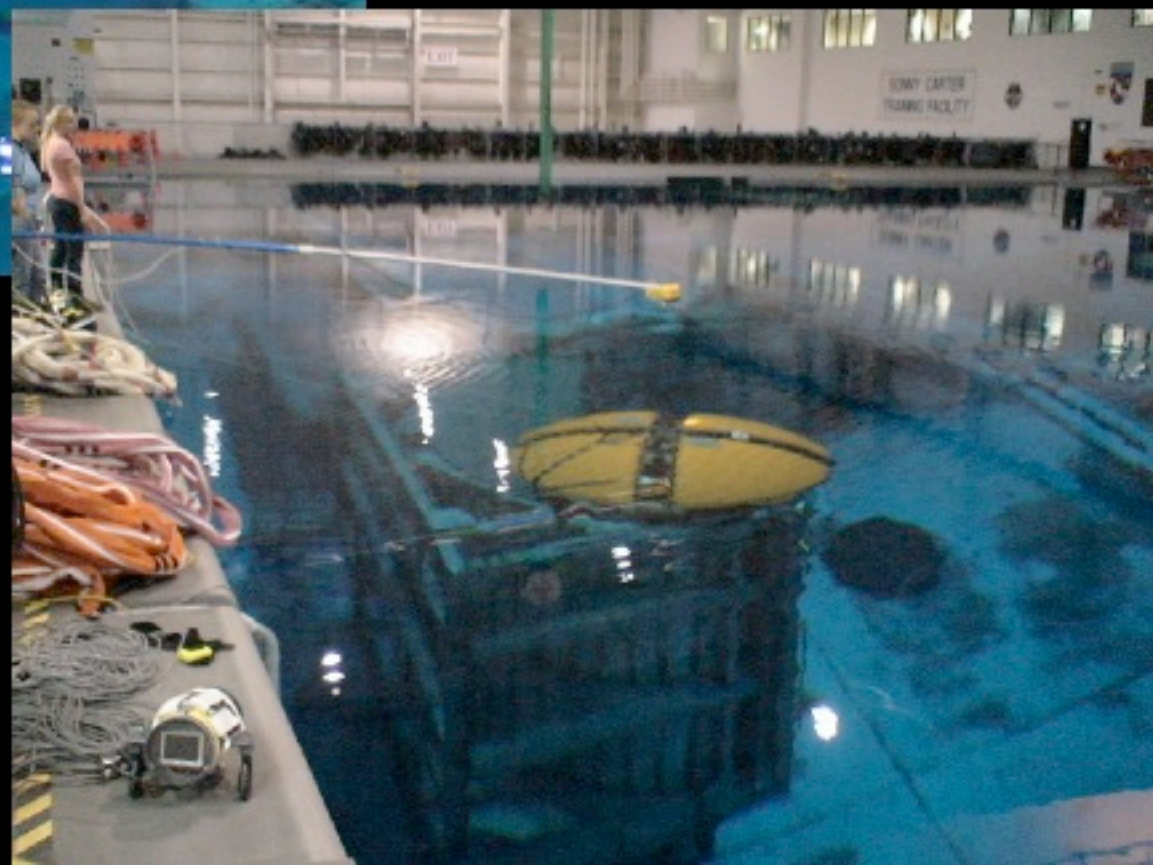
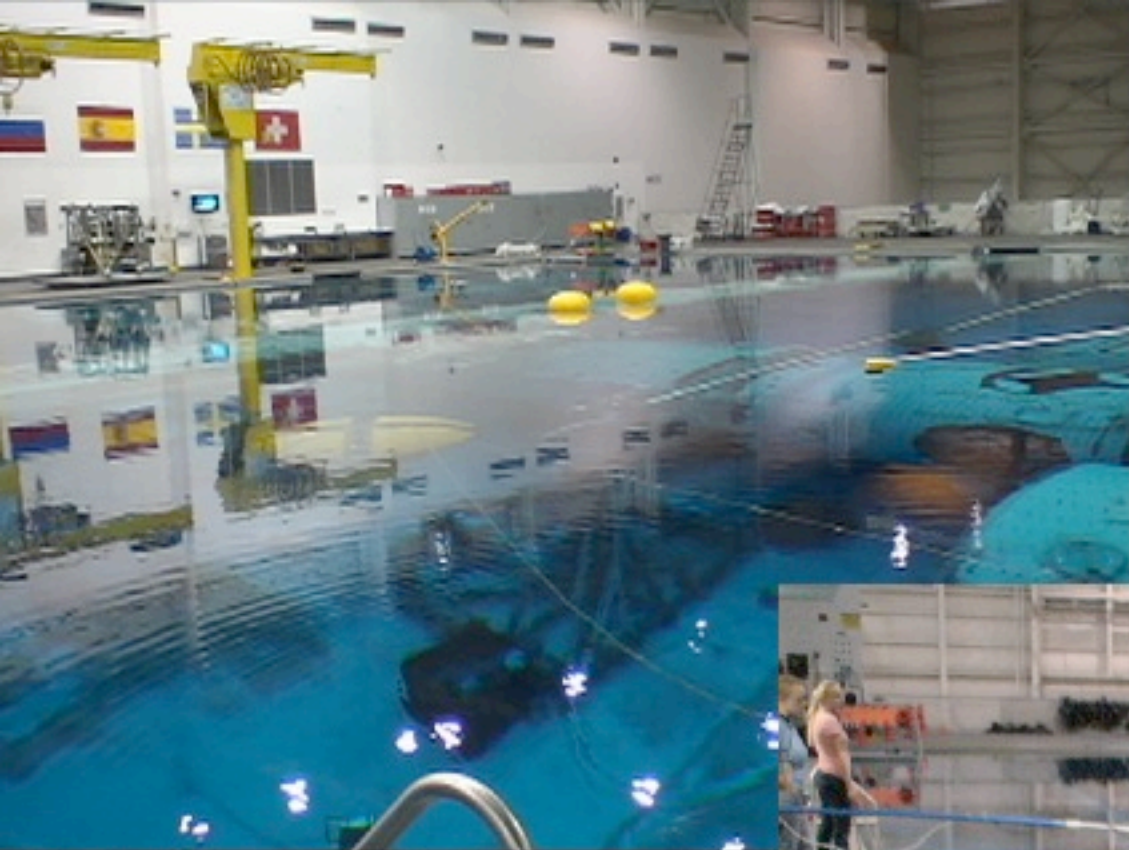
# SCINI

(Submersible Capable of Under Ice  
Navigation and Imaging)



ROV or Remotely Operated Vehicle





14:59:27.210 DAY:173

23

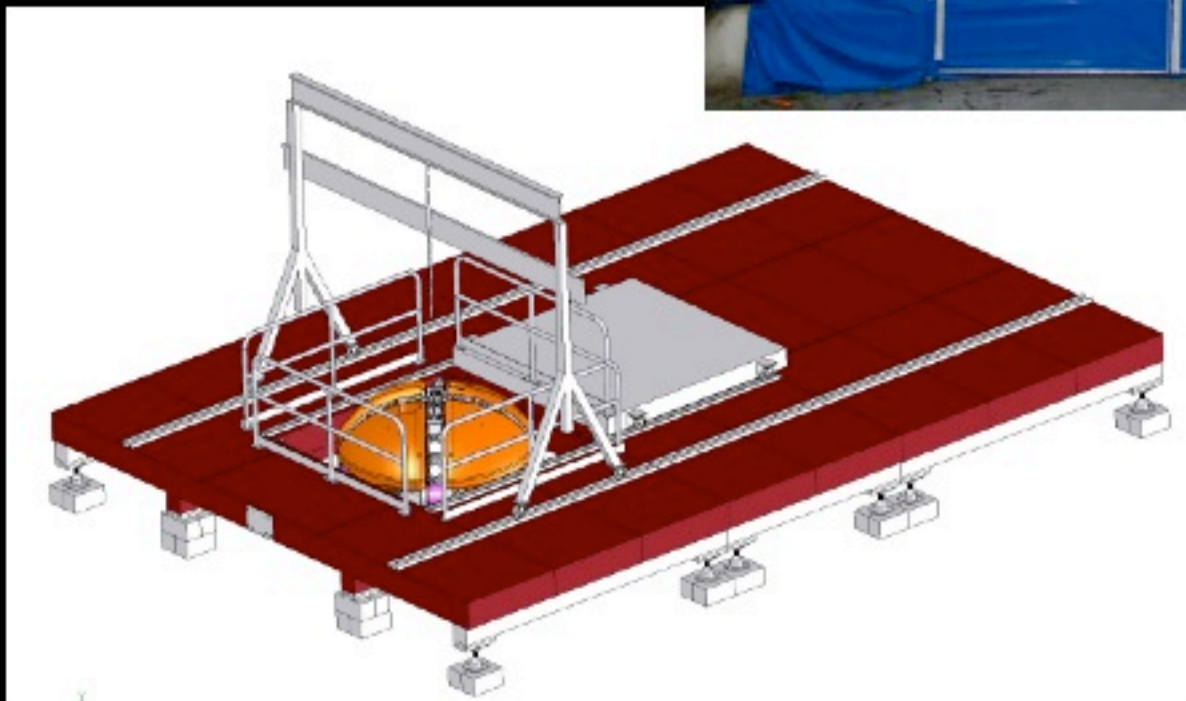
47:17.616 DAY:173

23



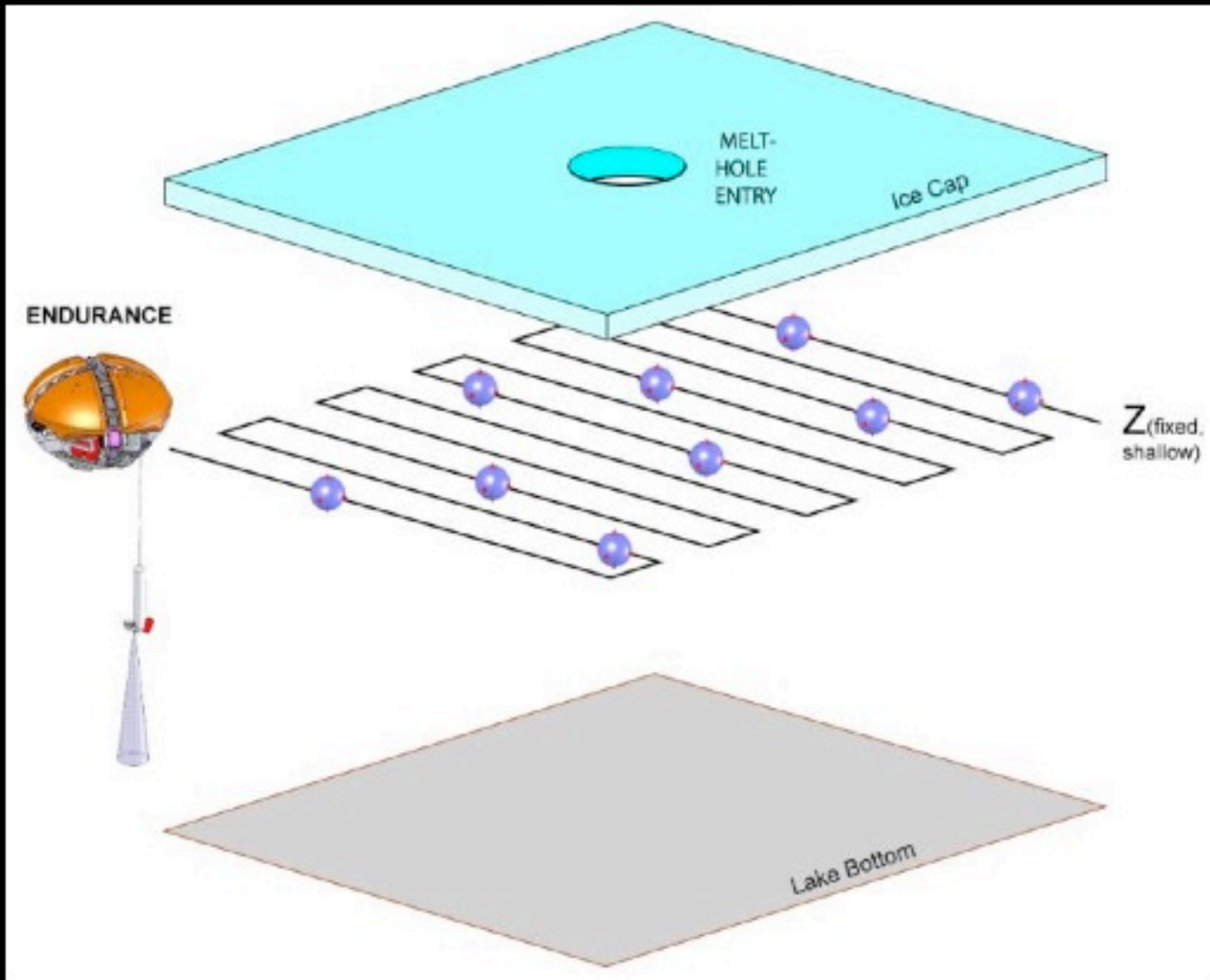
## ENDURANCE Science Objectives:

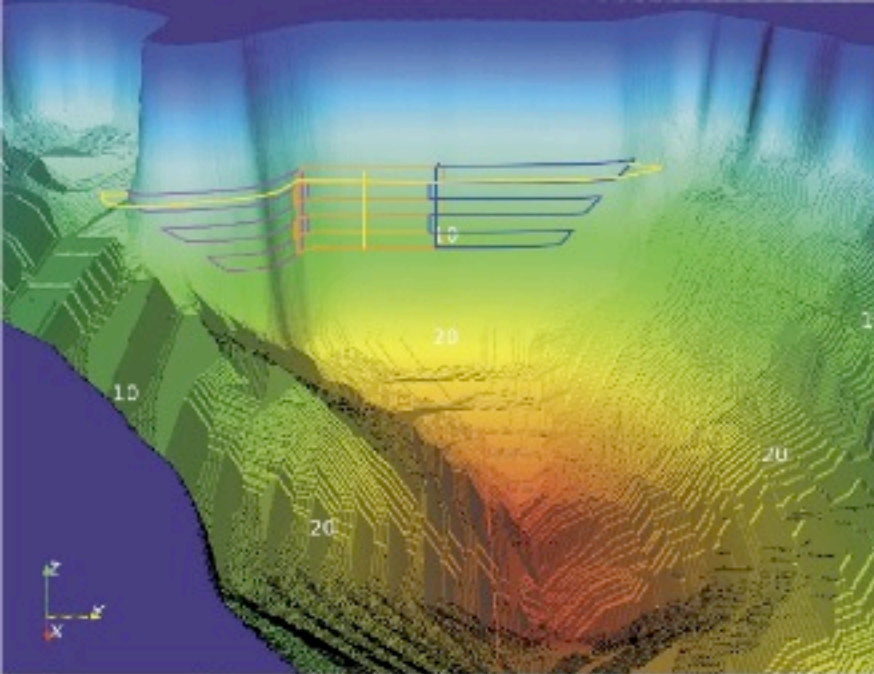
- ¥ Produce a 3D map of sub-surface West Lake Bonney.
- ¥ Produce a fine 3D map and photo moosaic of the sub-surface face of Taylor glacier
- ¥ Conduct vertical drop sonde missions at 100x100 m xy scale



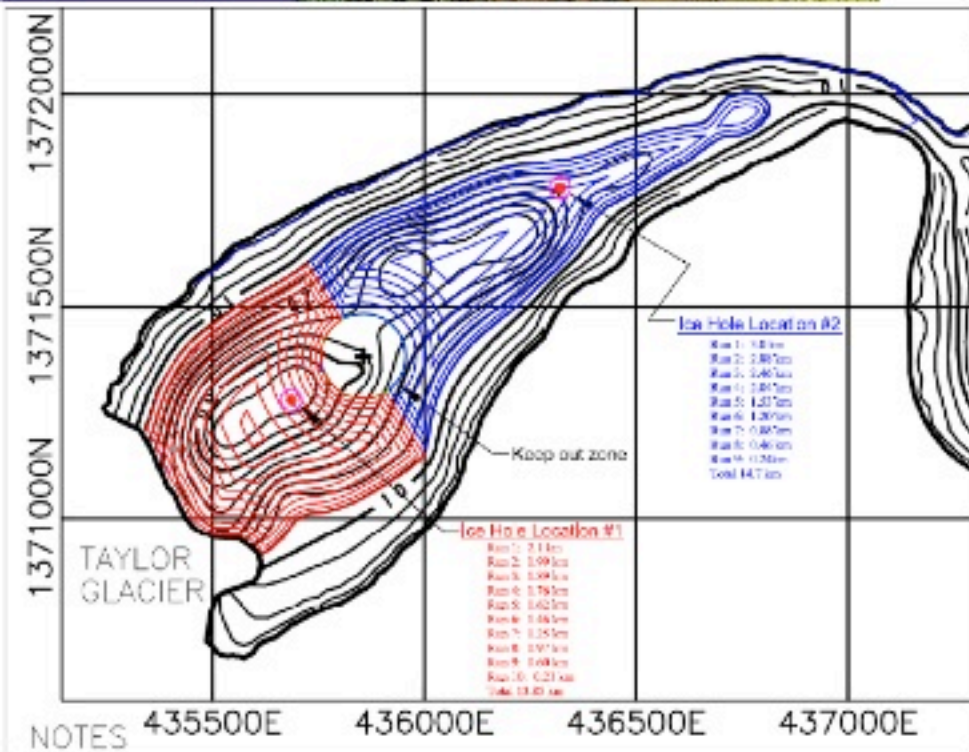
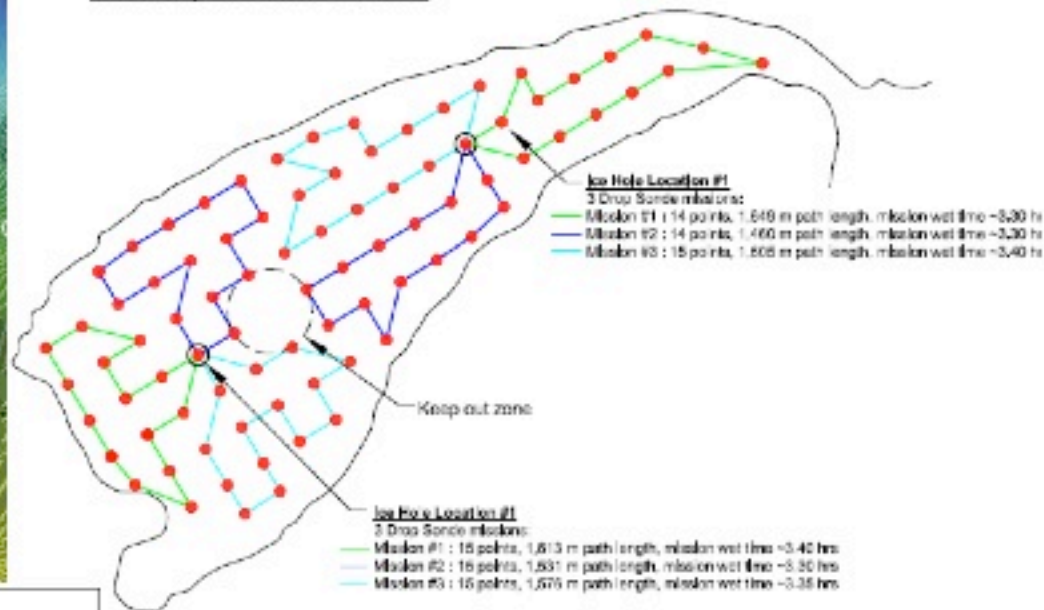


# ENDURANCE - Intelligent Sample Selection Location And Drop Sonde Spooler





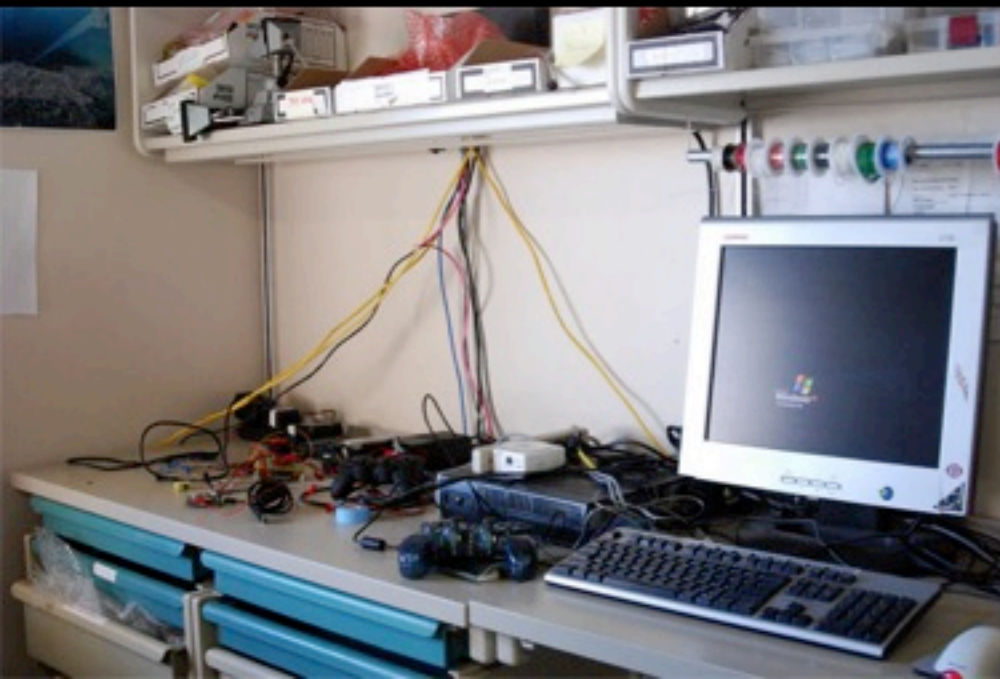
### WLB Drop Sonde Missions V2



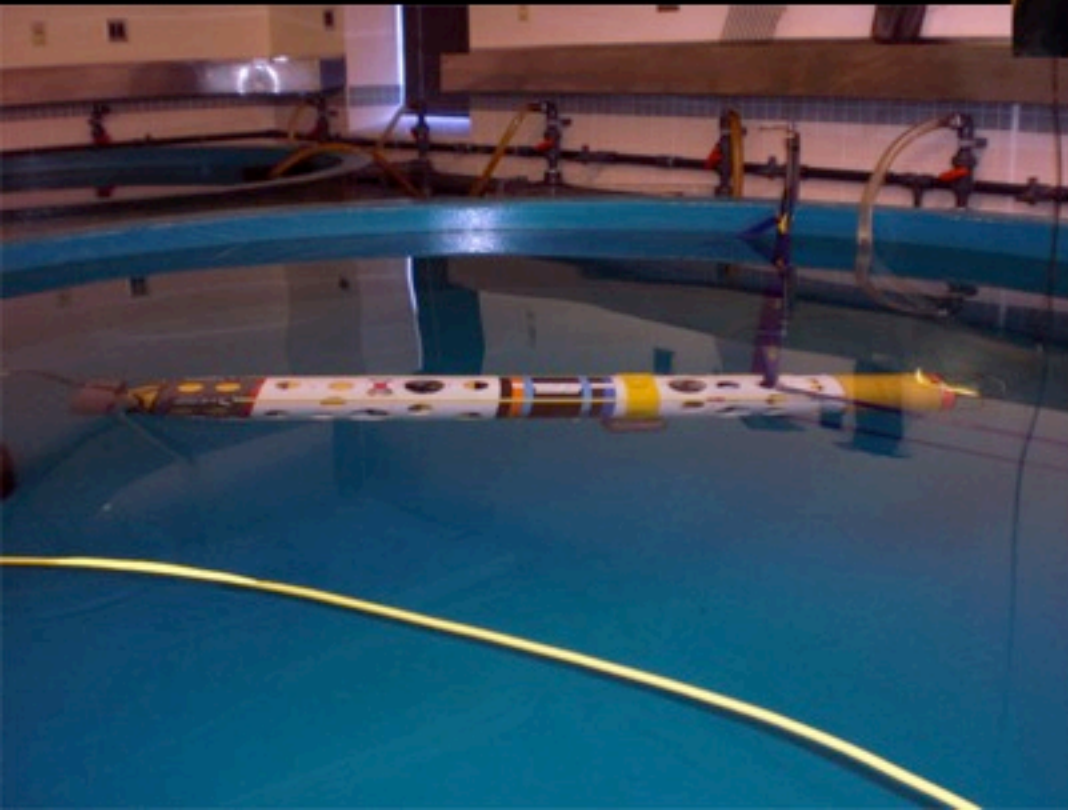
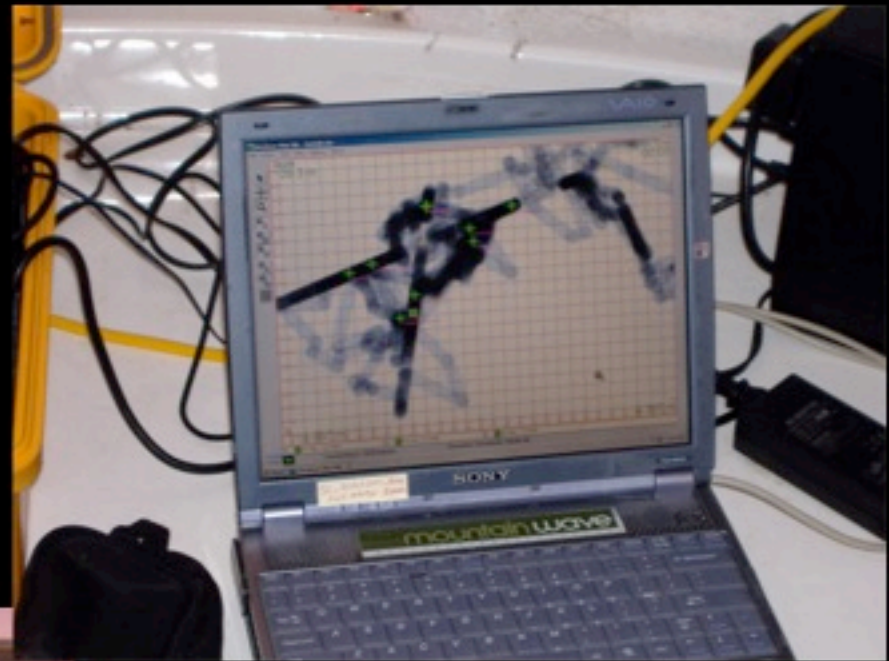




SCINI  
is Engineered



# SCINI Gets Tested in the Test Tank





# SCINI Gets Tested in the Field





SCINI  
in the Field  
Some More



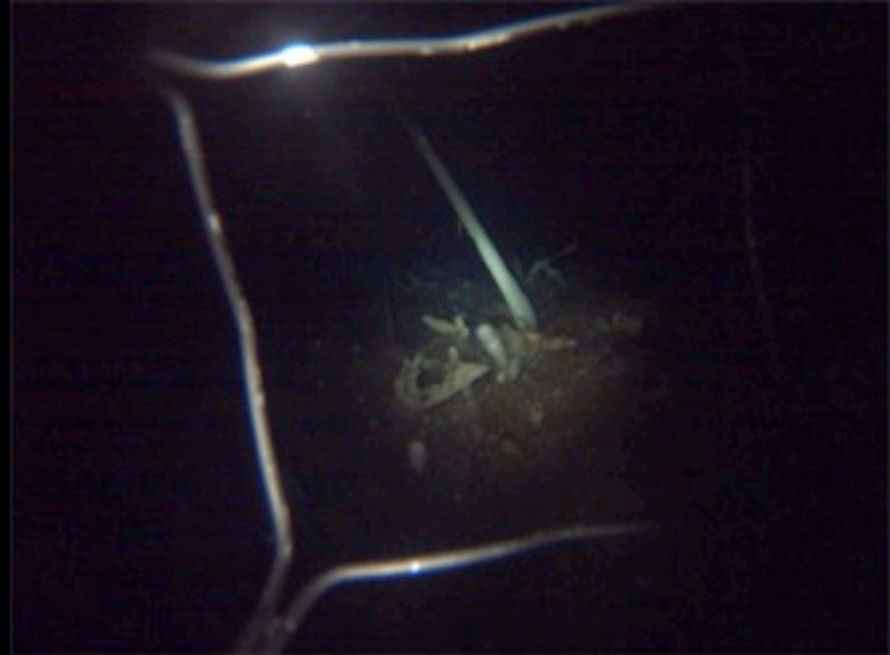
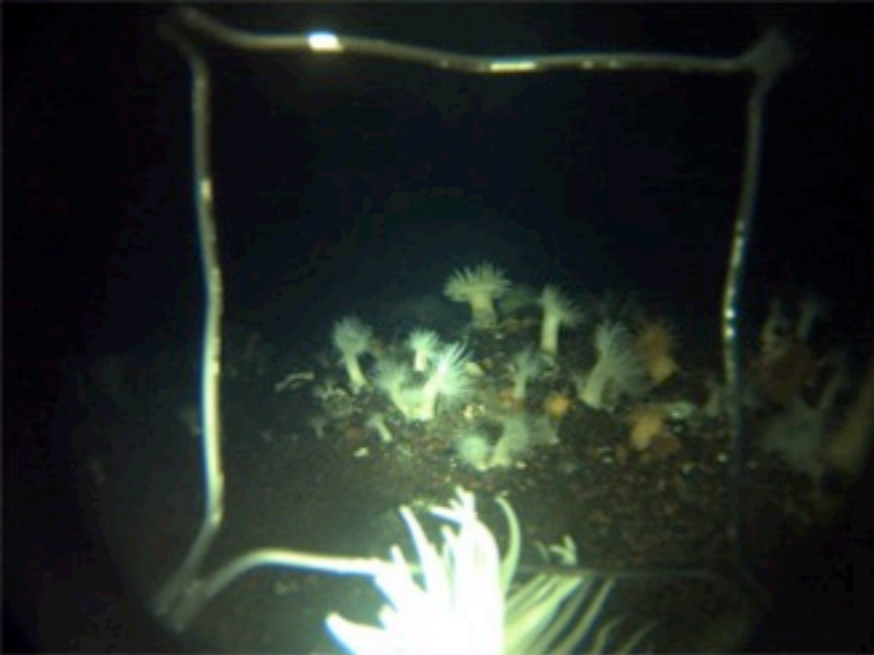


## SCINI's Science Objectives

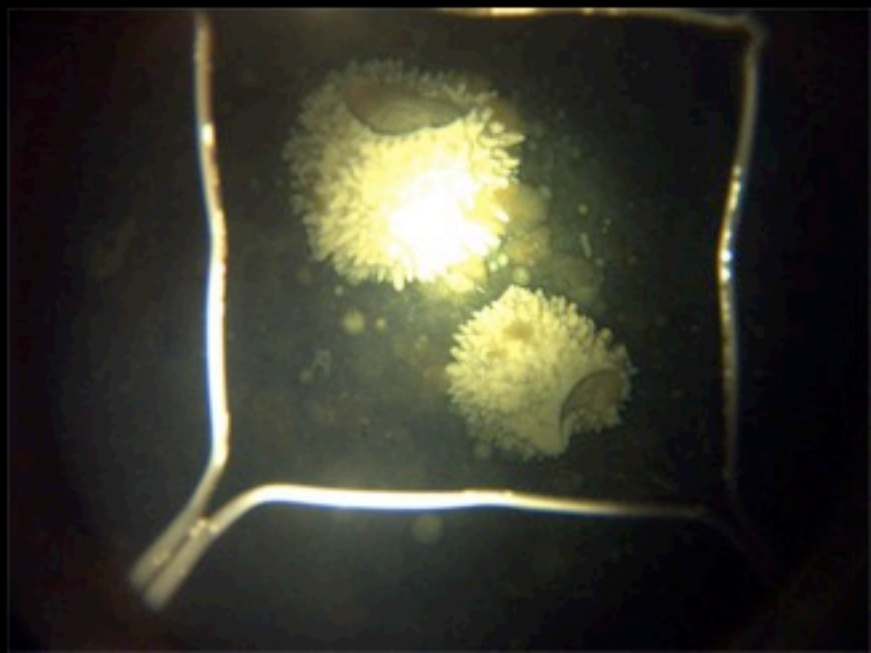
This year, our scientific goal is to expand the known ecological space in McMurdo Sound.

We have three specific target locations:

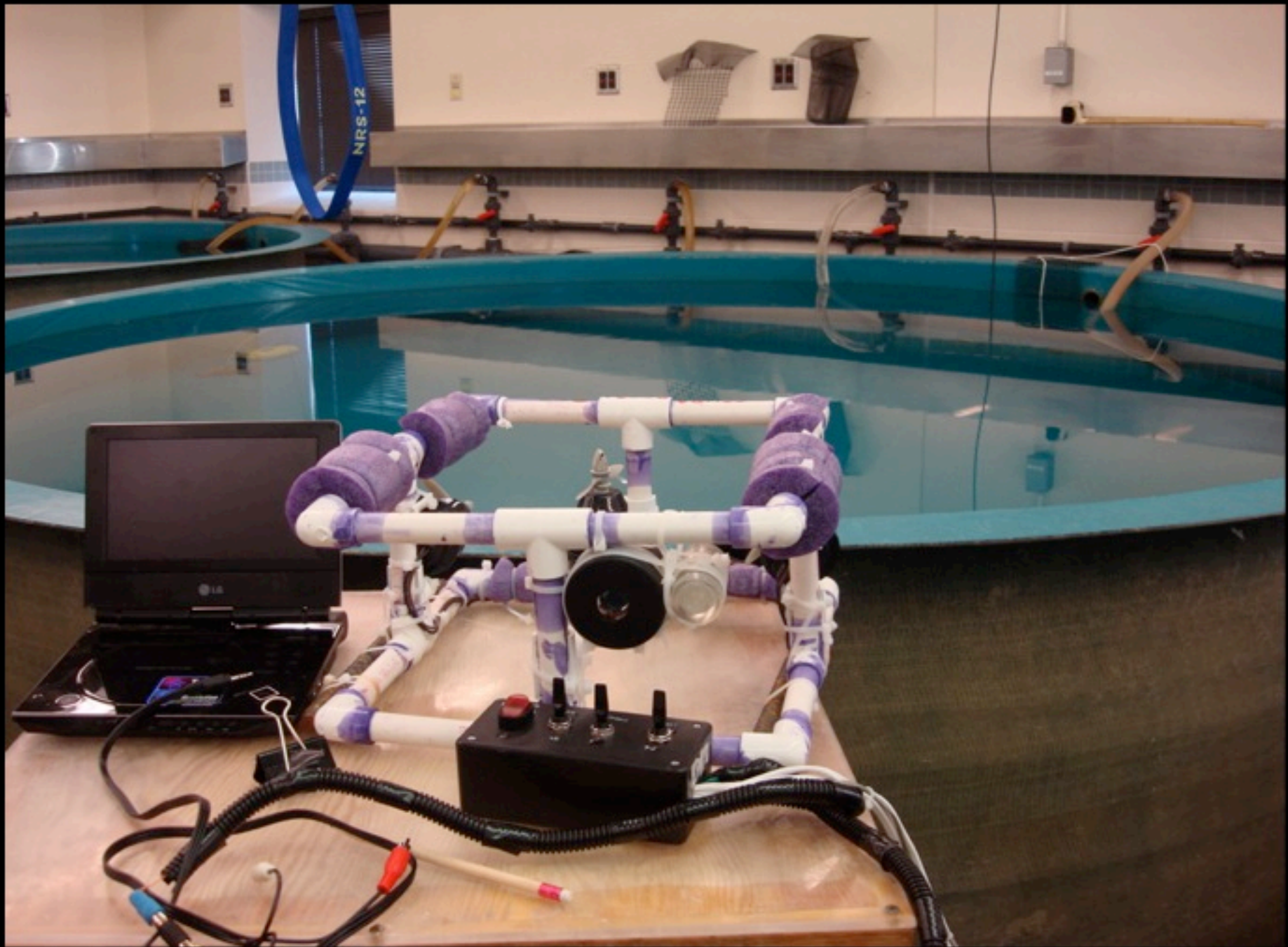
1. Cape Evans – we will trace the iceberg-driven patterns of destruction and rebirth on the seafloor.
2. Cape Armitage - SCINI will map the boundaries of the sponge field, and perhaps offer some clues to solve the mystery of why the sponges are in this location, but not in others.
3. Heald Island – Beneath this permanent ice shelf remains one of the few unexplored regions of our planet and we wish to explore this amazing place.

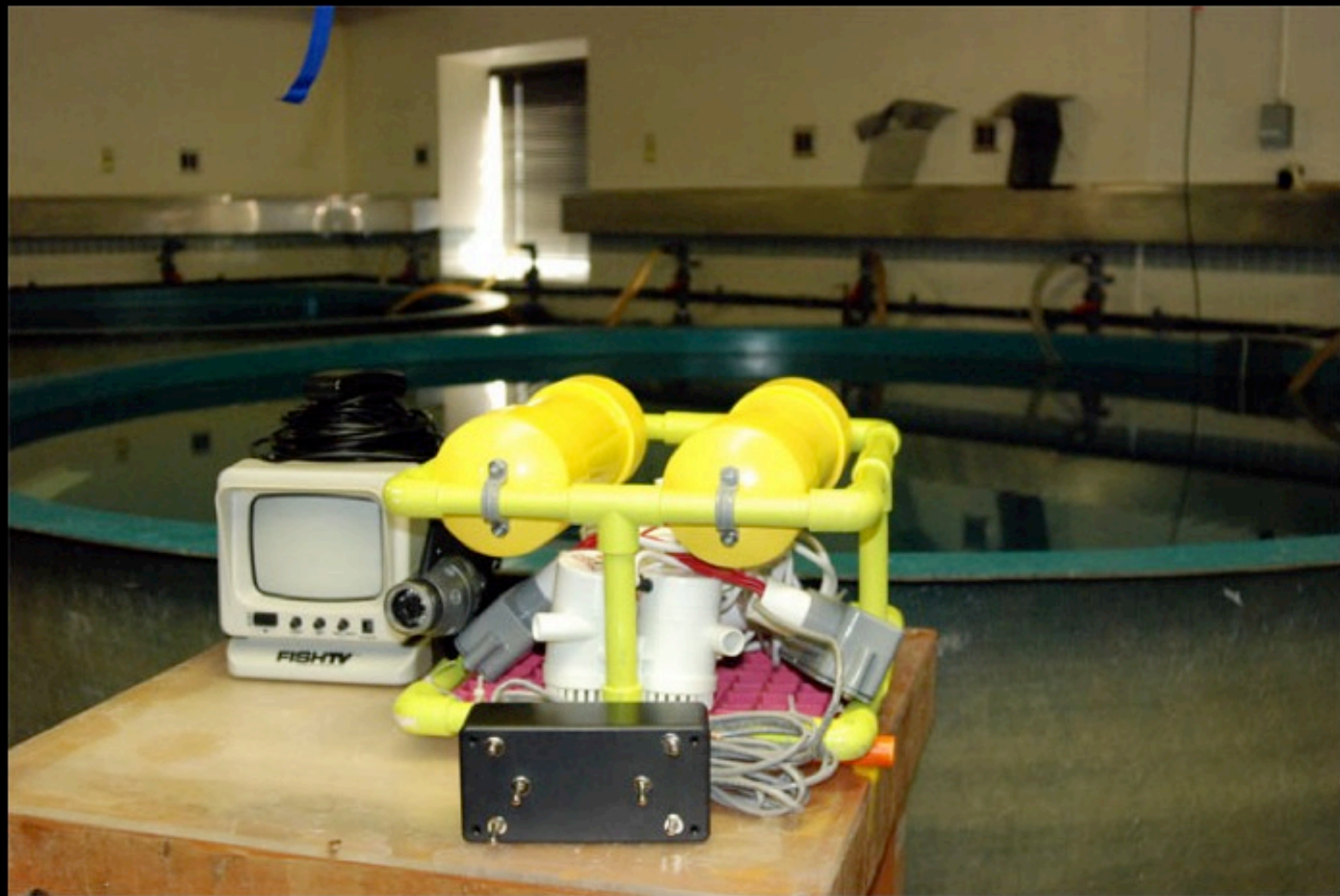


## SCINI Spies Many Interesting Sights













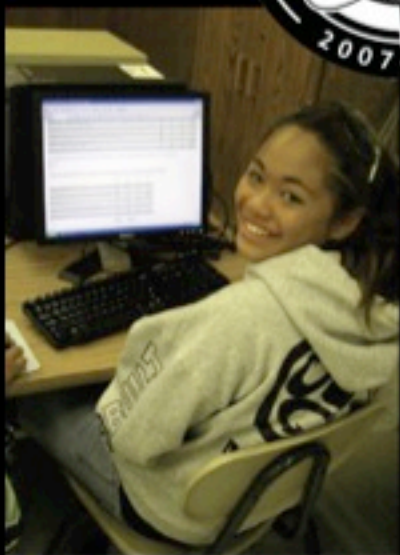
*Questions?*







**Live from IPY!**



## **Upcoming Events:**

3 December – Cameo Slaybaugh

4 December – IPY Day: Above the Poles

Register at [www.polartrec.com](http://www.polartrec.com)!

# Thank You!



*If you have further questions,  
please contact us at:  
info@polartrec.com or call  
1-907-474-1600*

*The archive of this event  
will be available shortly at:  
www.polartrec.com!*







