



Welcome to:

Live from IPY!

*with PolarTREC Teacher, Jeff Peneston &
the team onboard the Icebreaker Oden*



7 January 2009

9:00AM Alaska Standard Time [8:00AM HST, 10:00AM PST, 11:00AM MST, 12:00PM CST, 1:00PM EST].

If you will be joining the audio portion by telephone, dial 1-800-315-6338 (78732#), 5-10 minutes prior to the start of the event.



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 displays "Welcome to HorizonWimba" and the ARCUS logo. Below the slide is a toolbar with a "TALK" button circled in red. On the left, a chat window 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" options, with "Exit - Lobby - Help" circled in red. Arrows from external text labels point to these elements: "Slides will be shown here" points to the slide; "If using VOIP, press here to talk" points to the "TALK" button; "'Chat' with one person or the entire group" points to the chat window; "List of all participants" points to the "People" list; "Raise your hand to ask a question" points to a hand icon in the "People" list; and "Return to the lobby or exit" points to the "Exit - Lobby - Help" options.

Please note: Today's event will be recorded and archived at www.polartrec.com.

Roll Call

When called, please state your:

- Name
- School / Institution
- The number of students participating today

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



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

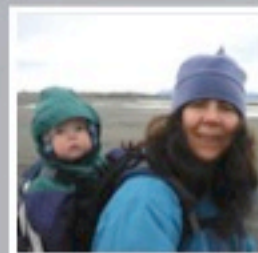
The PolarTREC Team



Wendy Warnick
PolarTREC PI
Executive Director



Helen Wiggins
Program Coordinator



Janet Warburton
PolarTREC
Project Manager



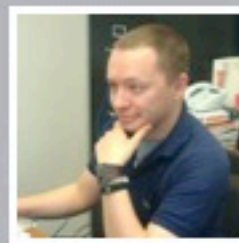
Kristin Timm
PolarTREC
Project Manager



Ronnie Owens
Web Developer



Ben Wade
Web Developer



Zeb Polly
Systems Administrator



Joed Polly
Video Production

...with help from the
entire staff at ARCUS

ARCUS





Jeff Peneston
Liverpool High
School

PolarTREC Teacher



Thomas Strömsnäs
Chief Officer of the Oden

Ocean Currents and Transport Team




Dr. Xiaojun Yuan
Dr. Raymond Sambrotto


Lamont-Doherty Earth
Observatory of Columbia
University




U.S. Sea Ice Team

A portrait of Dr. Tish Yager, a woman with dark hair, smiling. She is wearing a dark blue jacket with a circular logo on the left chest. The photo is tilted slightly to the right.

Dr. Tish Yager
Univ. of Georgia

A portrait of Kevin Bakker, a man with short brown hair, wearing a white button-down shirt. He is looking to the right with his hand raised to his forehead, shielding his eyes from the sun. The background is a clear blue sky. The photo is tilted to the right.

Kevin Bakker
Masters Student

A portrait of Brett Heilich, a man with light brown hair, smiling broadly. He is wearing a red and white plaid shirt over a white t-shirt. The background shows a clear blue sky and a hint of the ocean. The photo is tilted to the right.

Brett Heilich
Undergraduate
Student

Seal Research Team

Dr. Tero Härkönen
Dr. Olle Karlsson
Dr. Jonas Tielmann

Sweden's Museum of
Natural History



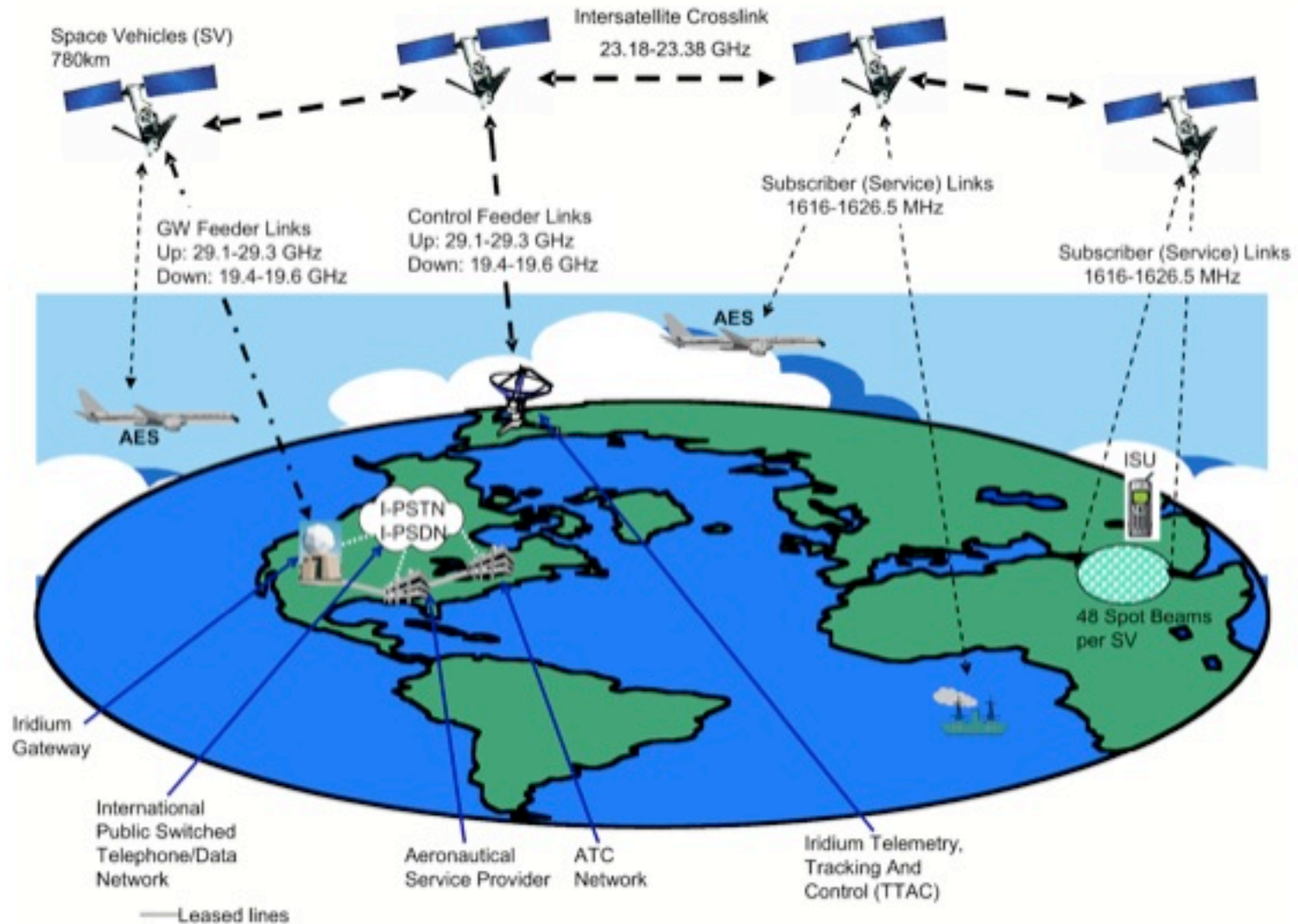
Environmental Chemistry



Dr. Henrik Kylin

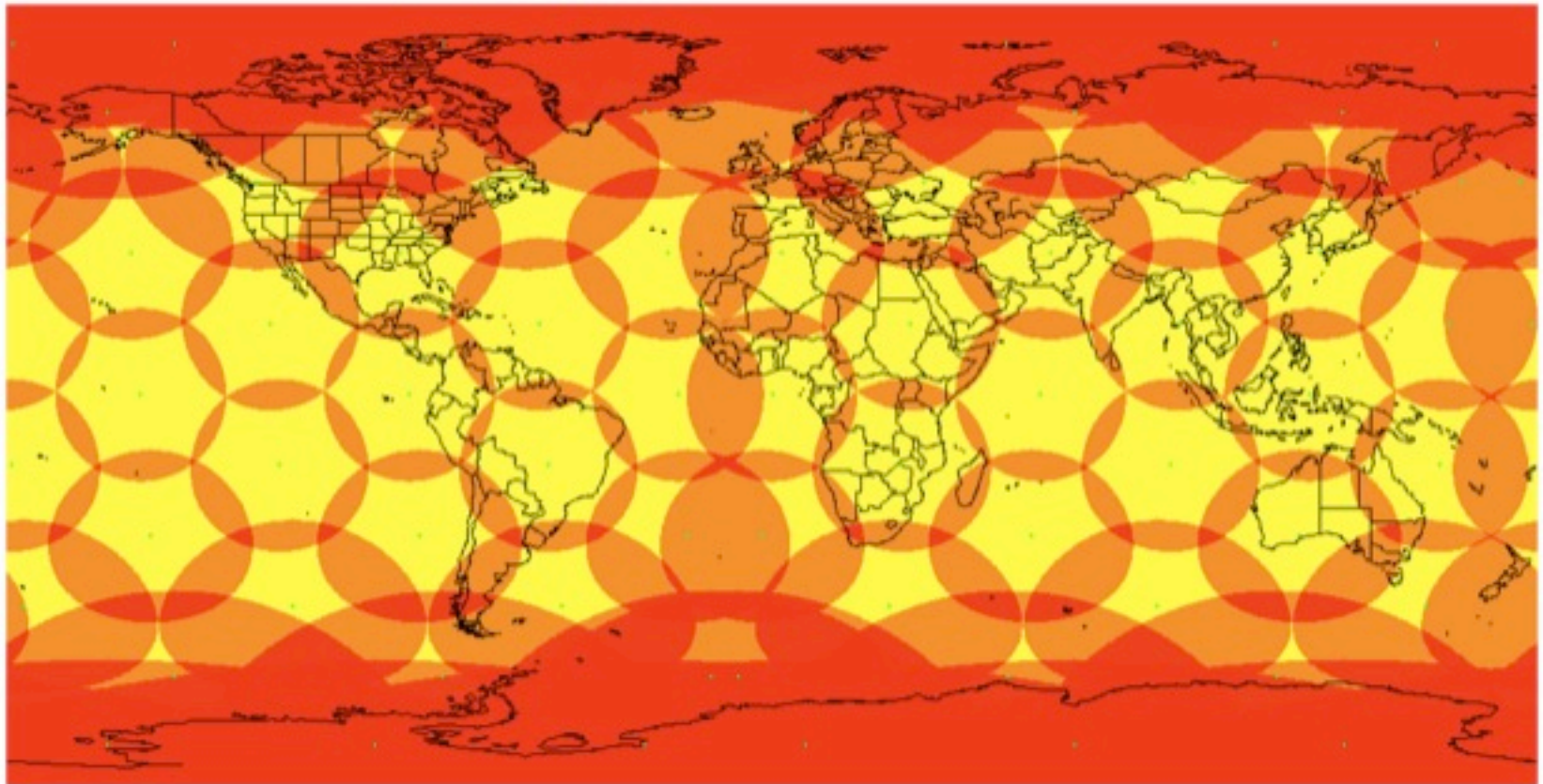
Swedish University of
Agricultural Sciences

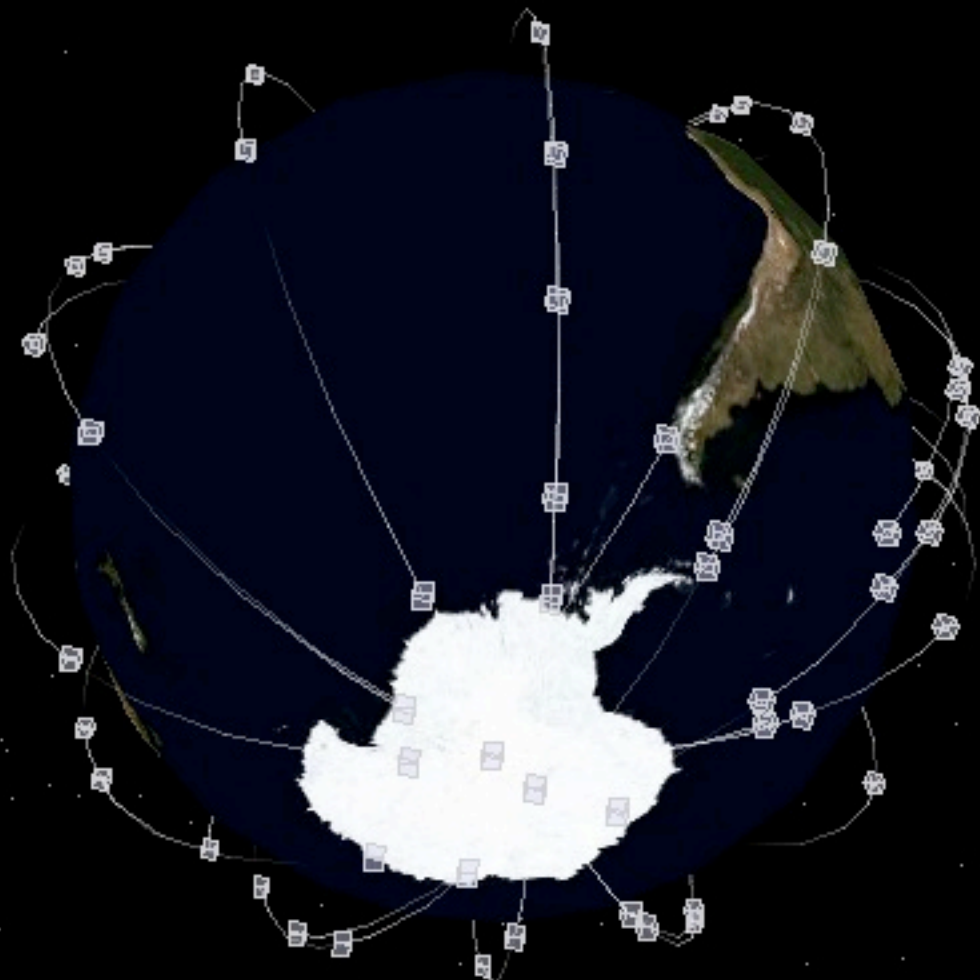
Iridium Satellite System



Iridium Coverage Map

*Mercator map of coverage of the Iridium constellation,
with 66 active satellites in 6 planes of 11.*





Where are Mr. Peneston & the Team?





Approximate
Current
Location

McMurdo Station



- 10 King Sejong (Rep of Korea)
- 11 Marambio (Argentina)
- 12 Palmer (USA)
- 13 Presidente Eduardo Frei (Chile)
- 14 Rothera (UK)
- 15 San Martín (Argentina)
- 16 Vernadsky (Ukraine)
- 17 Escudero (Chile)

♦ Macquarie Island (Aus)

Oden's Two Part Mission





Builder: Götaverken, Arendal, Sweden -
Delivered: 1988

Length over all: 107.8 m

Beam extreme: 31.0 m

Depth to upper deck: 12.0 m

Icebreaking capability: 1.9 m level ice at
3 knots

Speed in open water: 16 knots

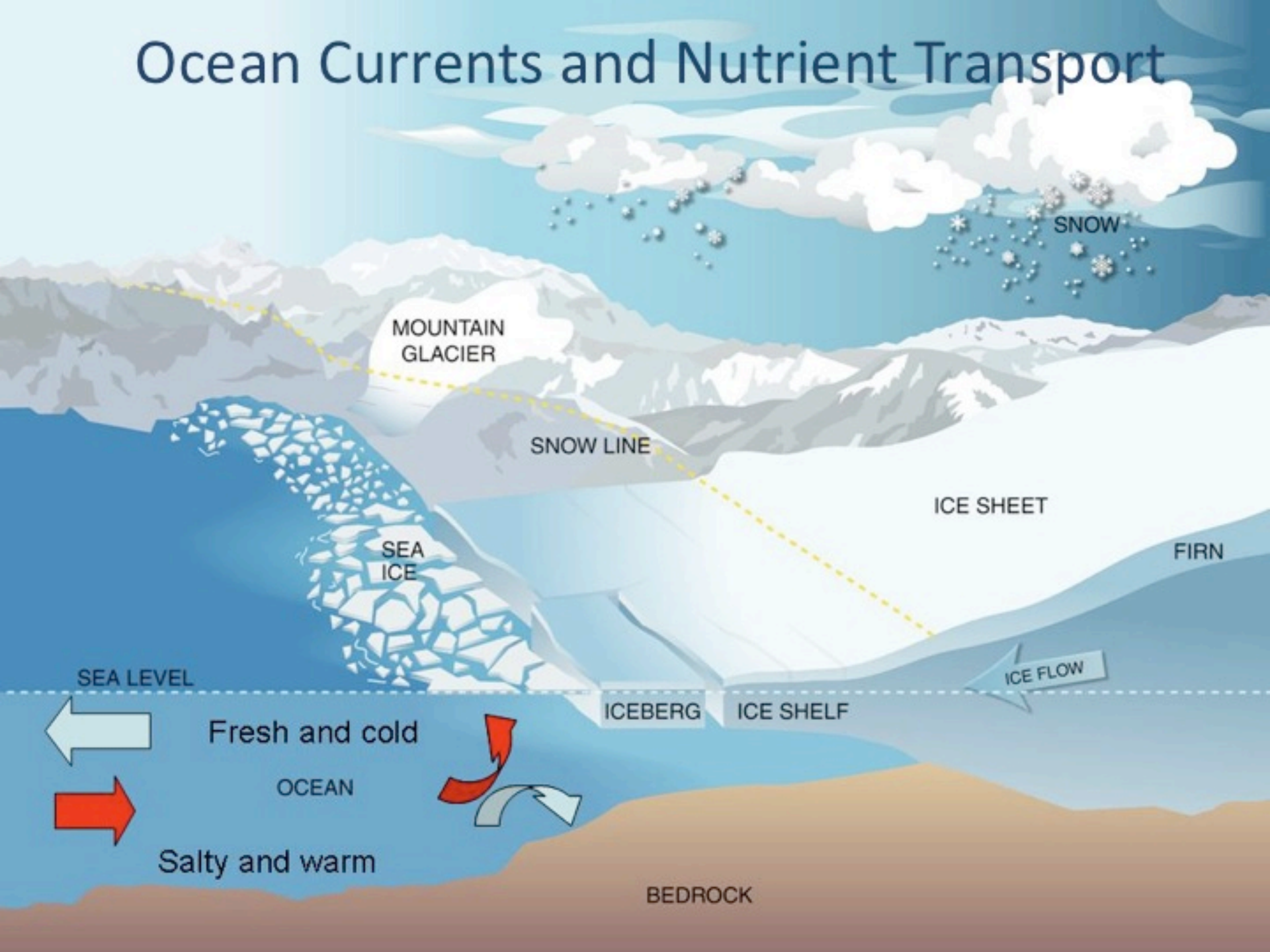
Propulsion: 4 medium speed 8-cylinder
diesel engines



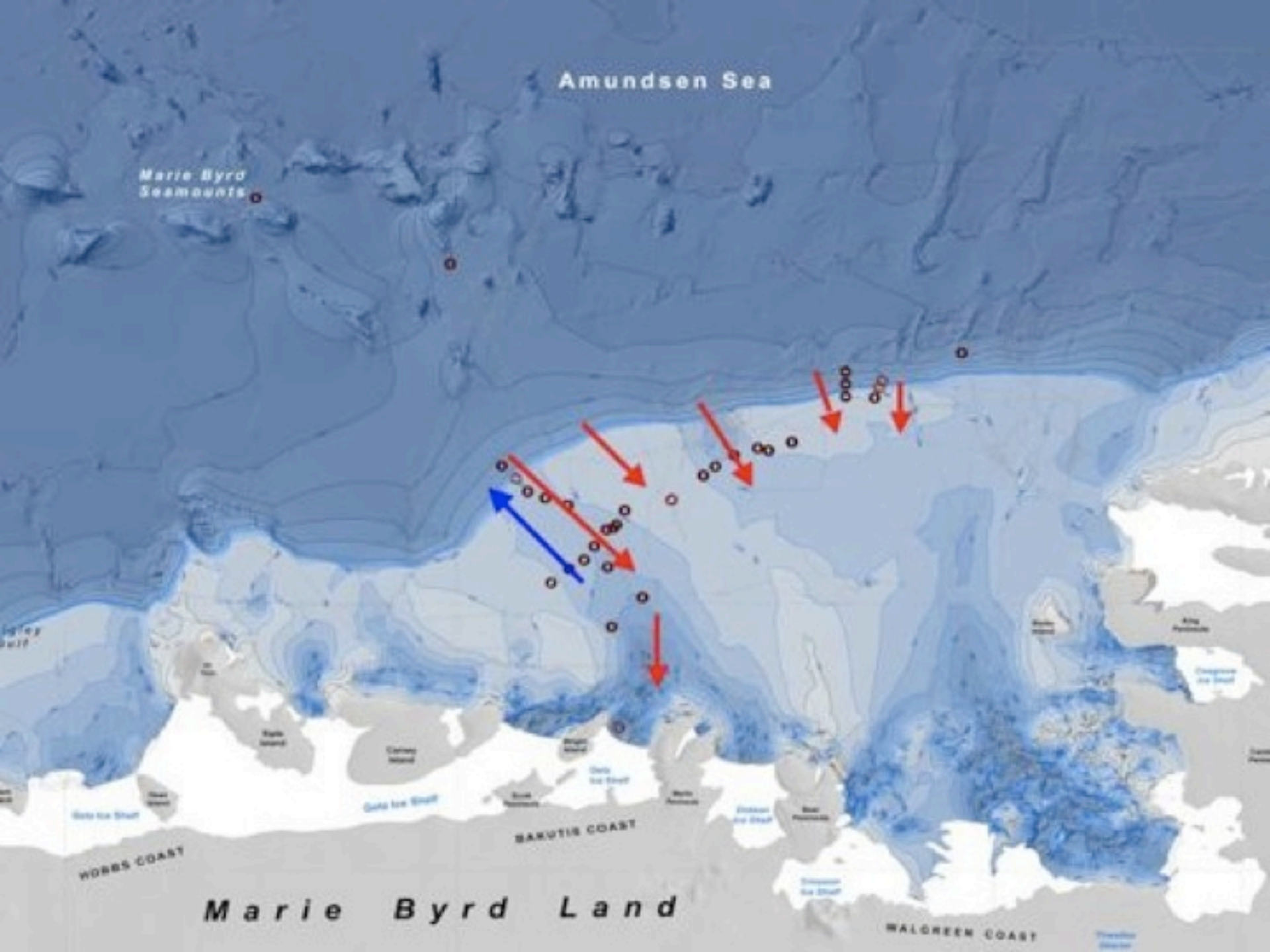


A powerful icebreaker - shaped like the belly of a whale

Ocean Currents and Nutrient Transport







Amundsen Sea

Marie Byrd Seamounts

HOBBS COAST

SAKUTIS COAST

Marie Byrd Land

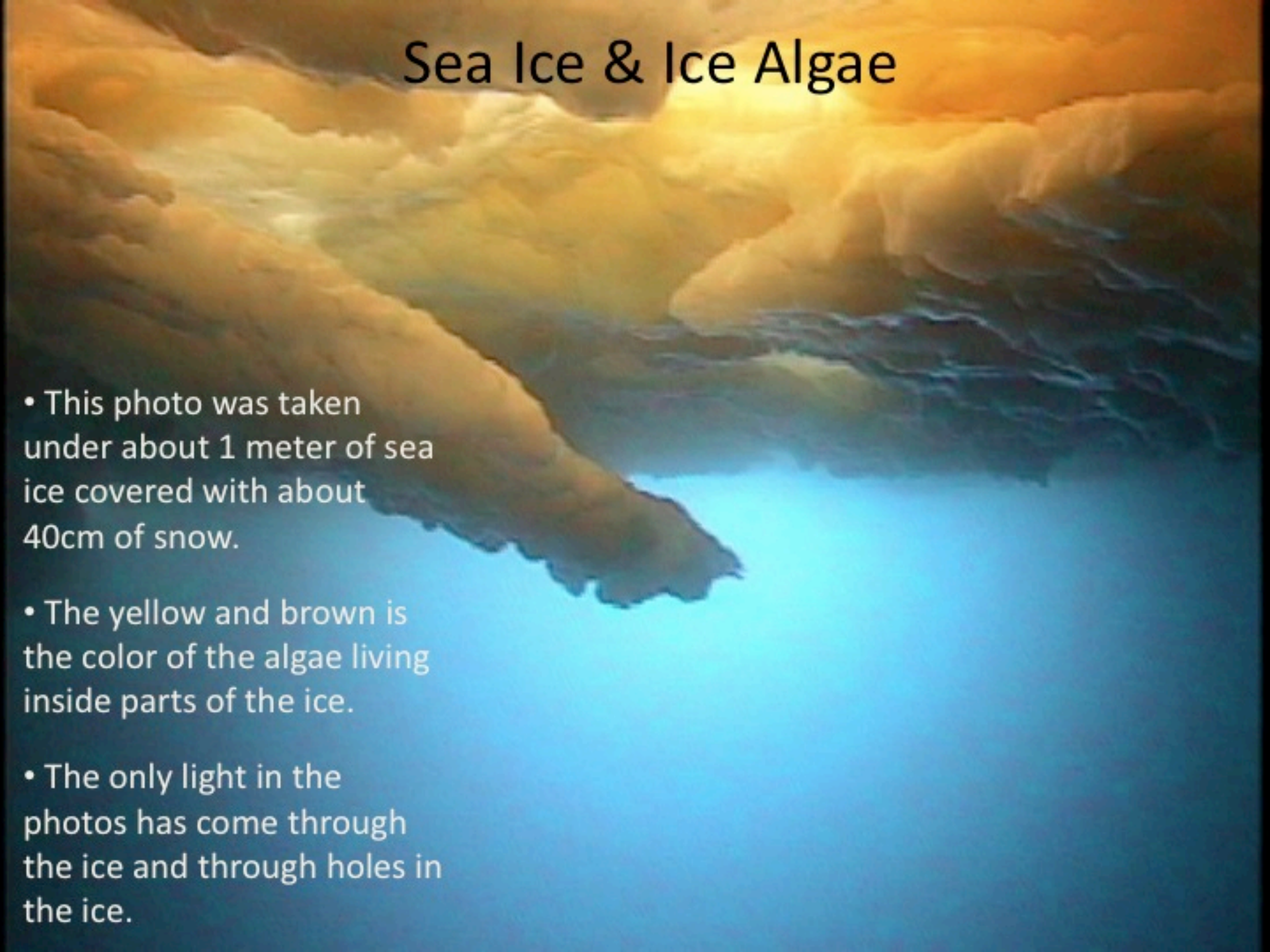
WALGREEN COAST

Sea Ice & Ice Algae

• This photo was taken under about 1 meter of sea ice covered with about 40cm of snow.

• The yellow and brown is the color of the algae living inside parts of the ice.

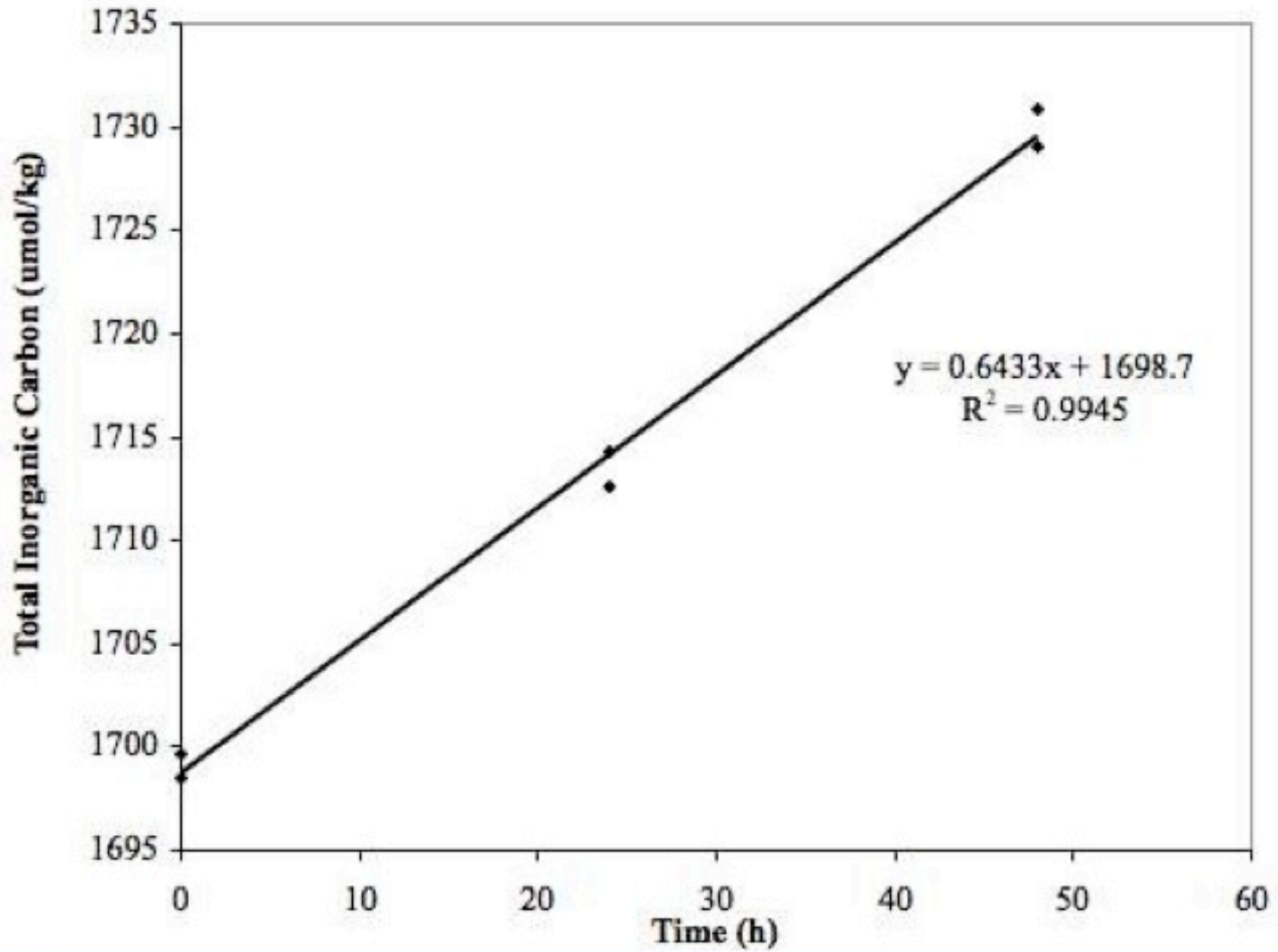
• The only light in the photos has come through the ice and through holes in the ice.







Station 40 Boat Core Respiration





Seal Research



Crabeater Seal



Weddell Seal

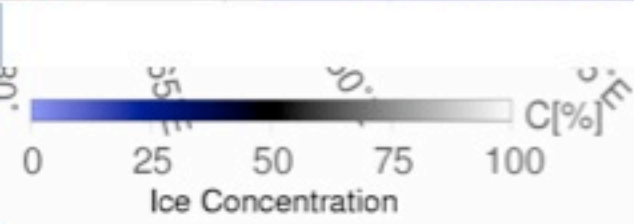
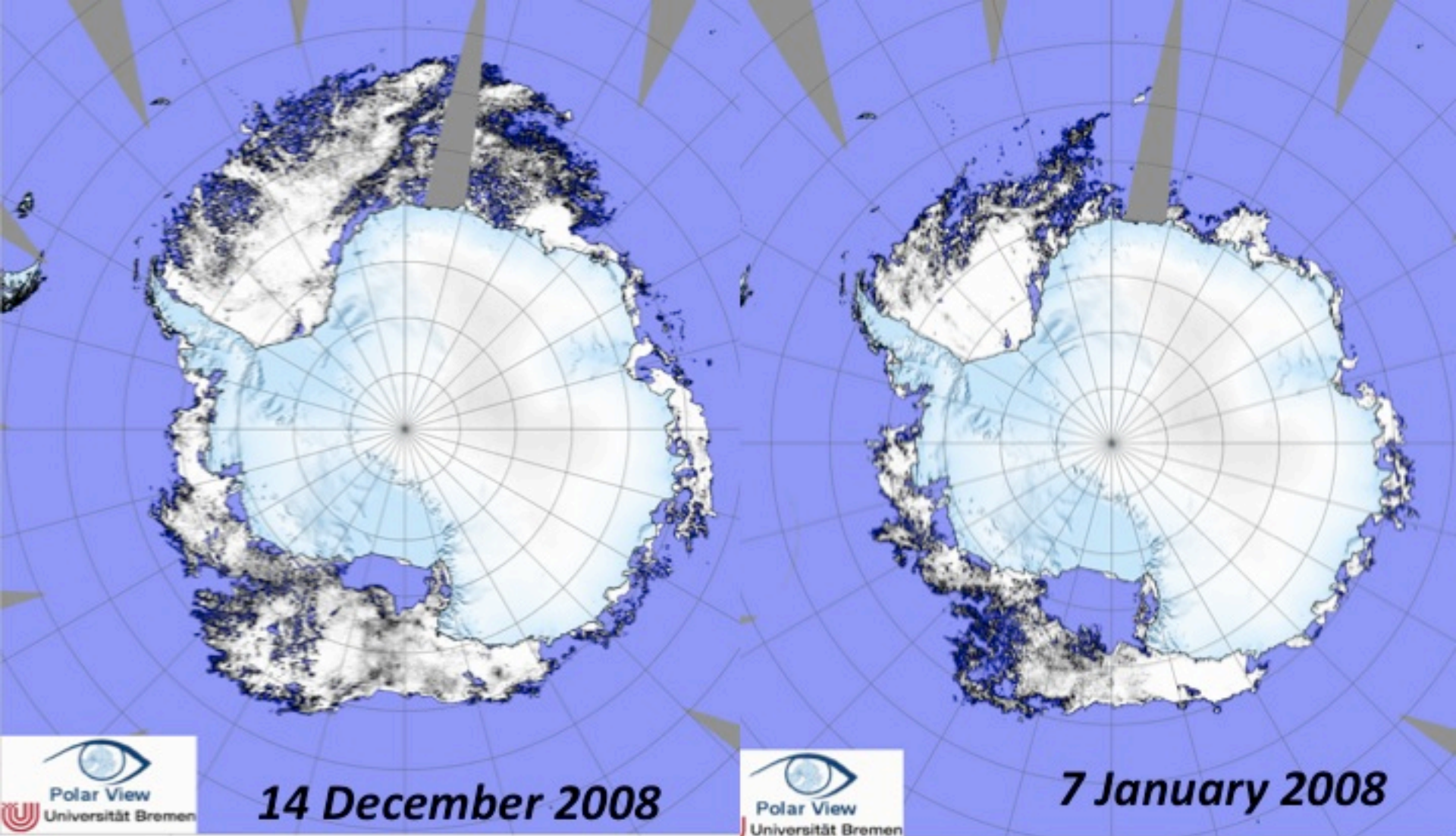


Ross Seal



Leopard Seal





Sea ice maps courtesy of Polar View: <http://iup.physik.uni-bremen.de:8084/amsr/amsre.html>

Questions

When asking a question, speak slow, loud, and clear and state your:

- **First Name**
- **Grade**
- **School**
- **Question**





Watch for Upcoming Events from Antarctica at :
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!*





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



Life on
the Oden

Orca Whales



Adelie Penguins



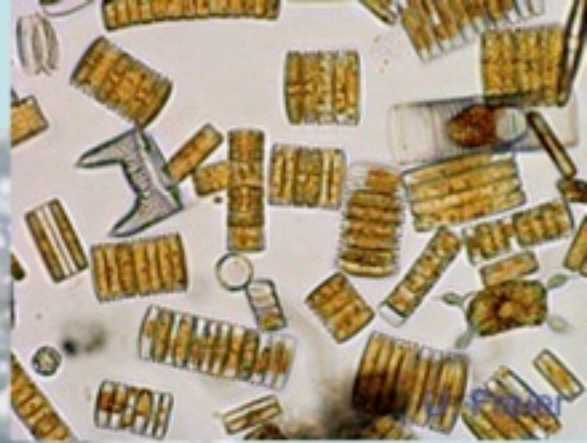
Sea-ice algal productivity

40-70 million metric tons (Tg) C yr⁻¹

5% of total productivity of Southern Ocean

Food source for higher trophics

Mediators of chemical transformations



Sea ice algae is at the base of the food chain here