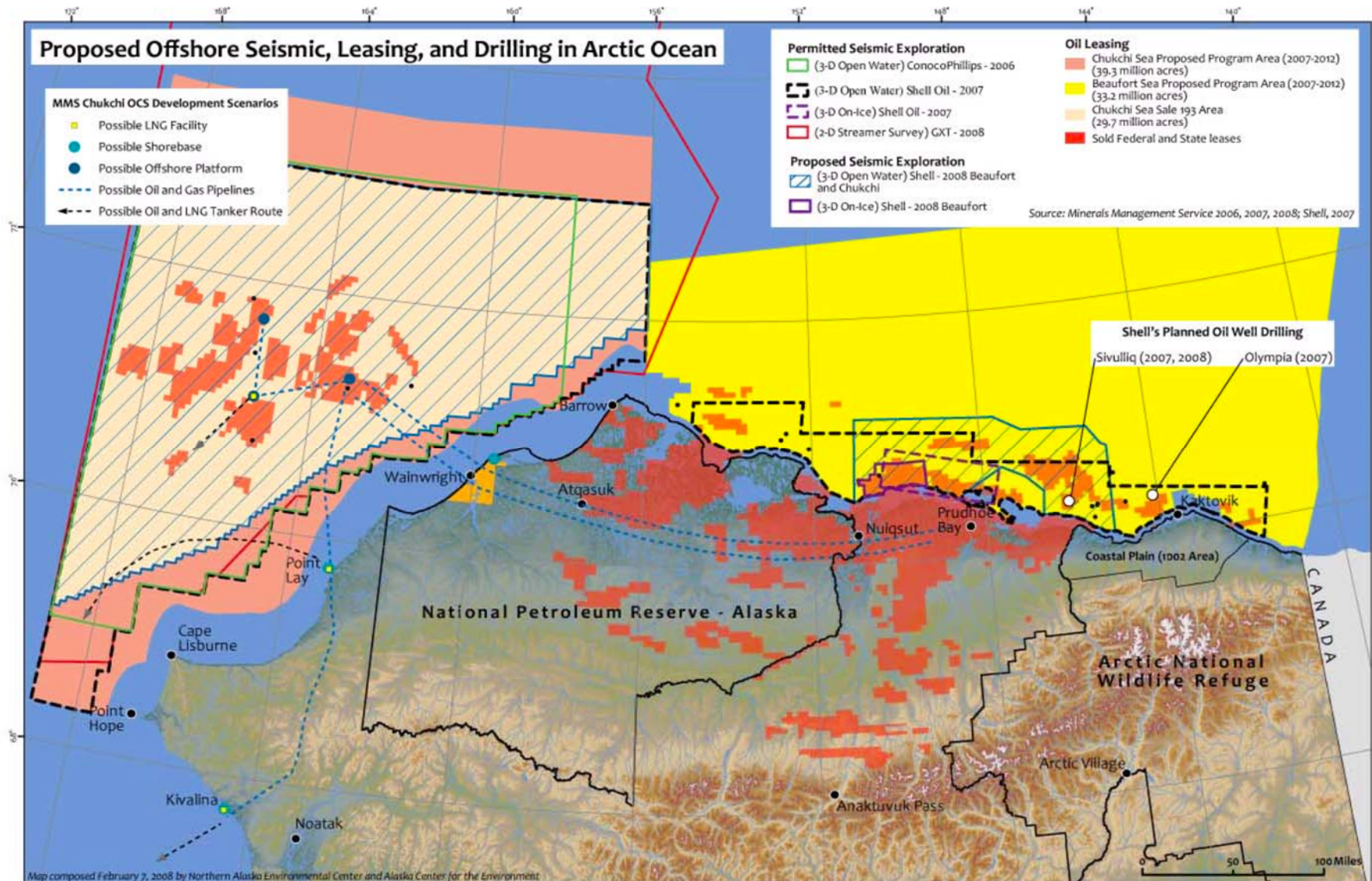


Coastal Erosion Doubles in Fifty Years Along Part of the Arctic Coast of Alaska – Northeastern NPRA



Dave Sanches, Alaska DOT

Off-Shore Drilling



Arctic Shortcut Beckons Shippers as Ice Thaws



Beluga Group

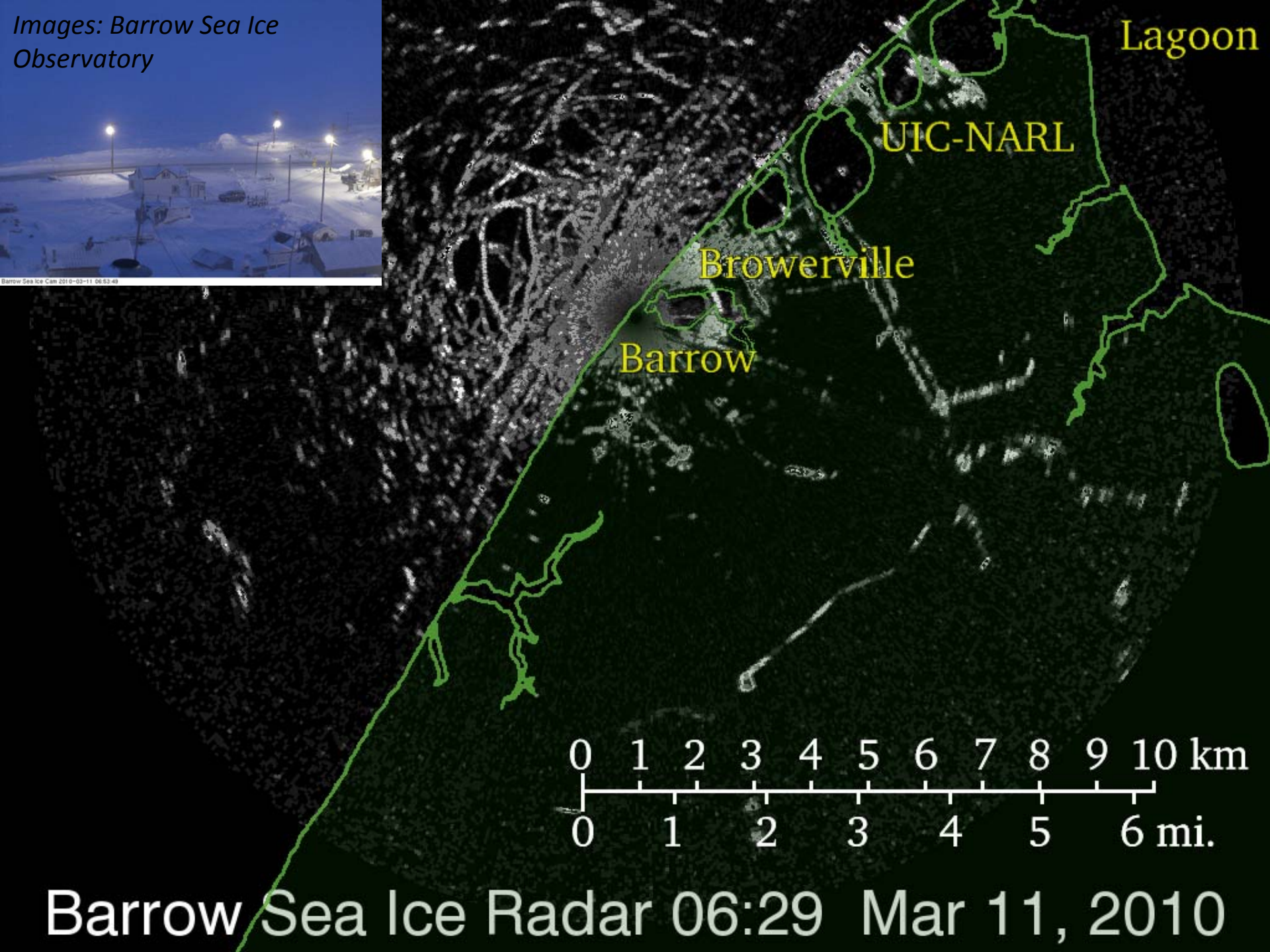
A German ship, following a Russian icebreaker, is about to complete a shipment from Asia to Europe via Arctic waters.

By **ANDREW E. KRAMER** and **ANDREW C. REVKIN**

Published: September 10, 2009



Barrow Sea Ice Cam 2010-03-11 06:53:49



0 1 2 3 4 5 6 7 8 9 10 km
0 1 2 3 4 5 6 mi.

Barrow Sea Ice Radar 06:29 Mar 11, 2010



Barrow Sea Ice Observatory

CALIB

COMPACT AIR-LAUNCH ICE BEACON

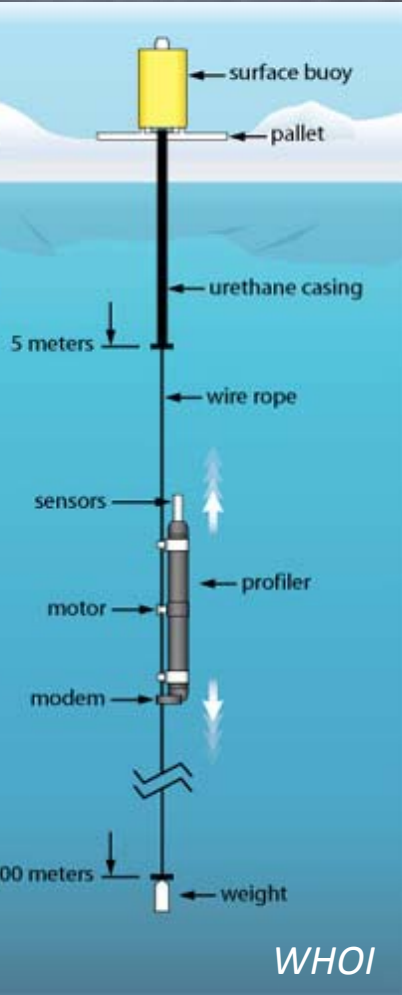
Compact and Rugged Design

Optional Sensors Available

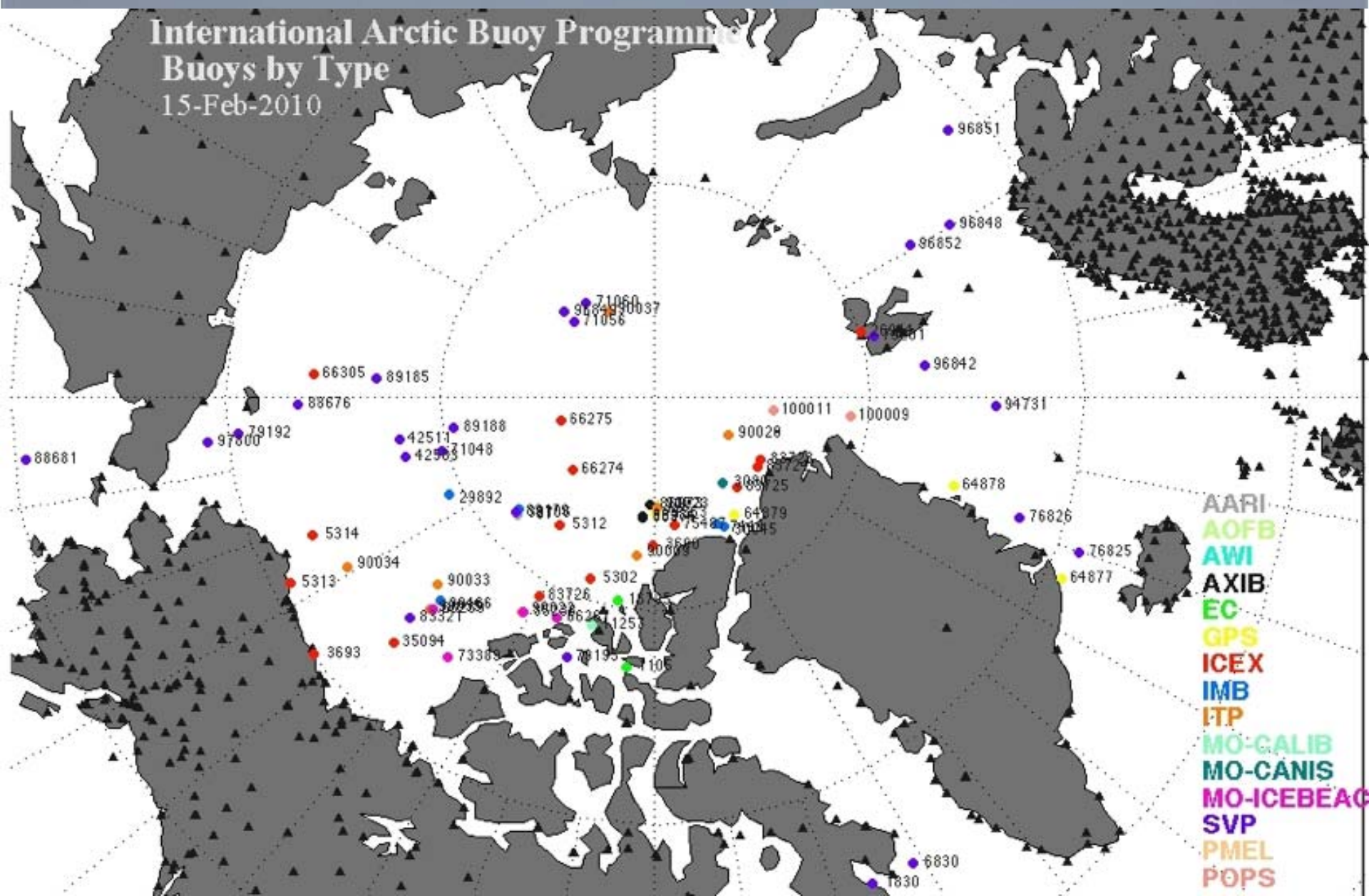
Air Deployable

METOCEAN

A white cylindrical beacon is shown being deployed from a black bag on a snowy surface. The beacon has a small opening at the top. In the background, a military aircraft is visible flying over a body of water.

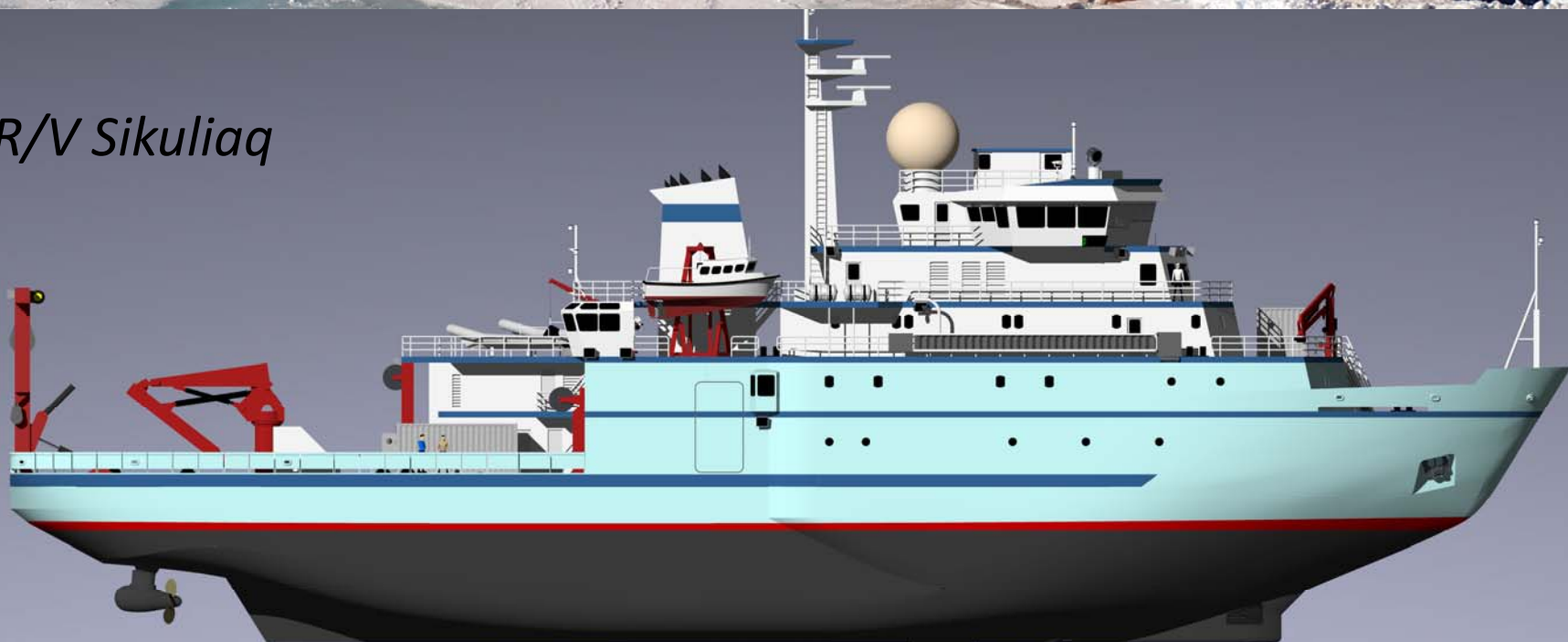


Multidisciplinary Platforms



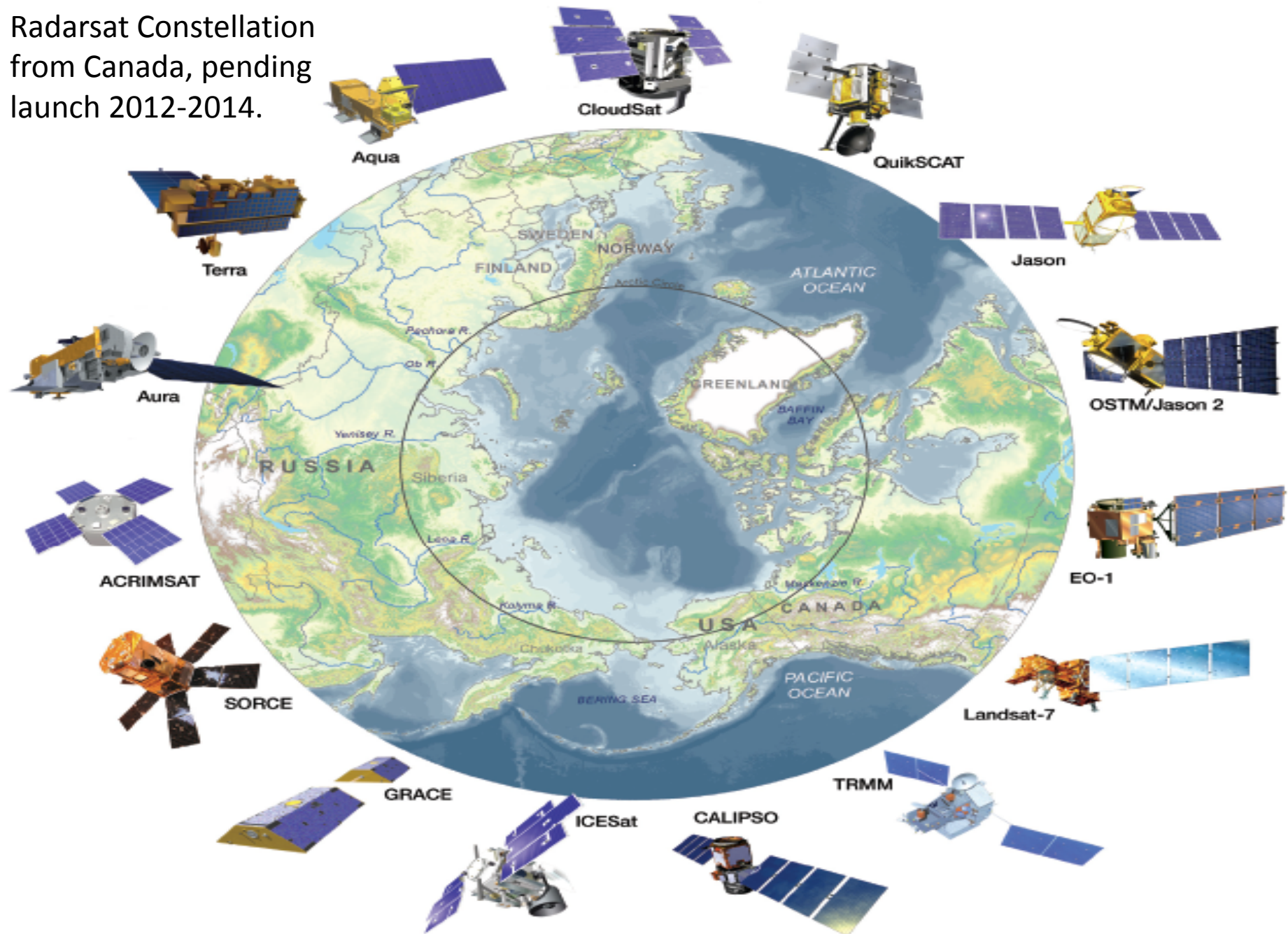


USCGC Healy



R/V Sikuliaq

Radarsat Constellation
from Canada, pending
launch 2012-2014.



From: Inter-agency Arctic Research Policy Committee Report on the Arctic Observing Network

Taking the Pulse of the Ocean

2030
Biomass,
numbers

Ecogenomic sensor

Bacteria

Plankton



Courtesy: G. Armbrust, U. Washington

Genomics technology and data volumes



3730xl

2004

2M/day



454 GSFlx

2005

50x



Solexa

2006

500x



AB Solid

2008

1000x +

Courtesy: G. Armbrust, U. Washington

“Technology” is not just Hardware

Infrastructure necessary to protect coastal regions (not limited to the Arctic) includes:

- Data (QA/QA, fusion, management)
- People
- Communication
- Coordination – in particular, monitoring in the Arctic requires international cooperation





Relevant Websites

Inter-agency Arctic Research Policy Committee Report on the Arctic Observing Network

<http://www.nsf.gov/pubs/2008/nsf0842/index.jsp>

SEARCH Implementation Plan

http://www.arcus.org/search/downloads/SIW_Report_FI_NAL.pdf

National Research Council. 2006. *Toward an Integrated Arctic Observing Network*.

http://www.nap.edu/catalog.php?record_id=11607

