

# 2007 Arctic Icebreaker and AICC Activities

Carin Ashjian, AICC Chair

# AICC



- Carin Ashjian (Chair)
  - Henrietta Edmonds (Vice-Chair)
  - Bernard Coakley
  - Rolf Gradinger
  - Steve Hartz (RVTEC)
  - Kate Moran
  - Peter Minnett
  - Robin Muench
  - Dan Schwartz (RVOC)
  - Rebecca Woodgate
- UNOLS Office

Photo by S. Roberts, HLY0402

# AICC Activities 2006/2007

- December 7-8th, 2006 “Icebreaker Retreat”, USCG Base Alameda CA
- January 9th and 10th 2007 - AICC Meeting in Seattle, WA
- February 28th, 2007 Alaska Eskimo Whaling Commission “Mini-Convention”, Ashjian (AICC); Forcucci (USCG); Cooper, Mayer, Sambrotto (2007 Healy Chief Scientists)
- Provided prioritization of science and science space upgrades to Healy proposed by Dale Chayes
- Conducted debriefs of Healy 2006 cruises
- Continued to monitor icebreaker science-local community communication, including establishing communications with the State Department as well as continuing discussions with the AEWC
- Monitor and maintain interest in issues relevant to Arctic icebreakers from the critical to the near mundane

HEALY in 2007: 1<sup>st</sup> Bering Ecosystem Study (BEST) Cruise  
HLY0701: 10 April - 12 May 12, 2007

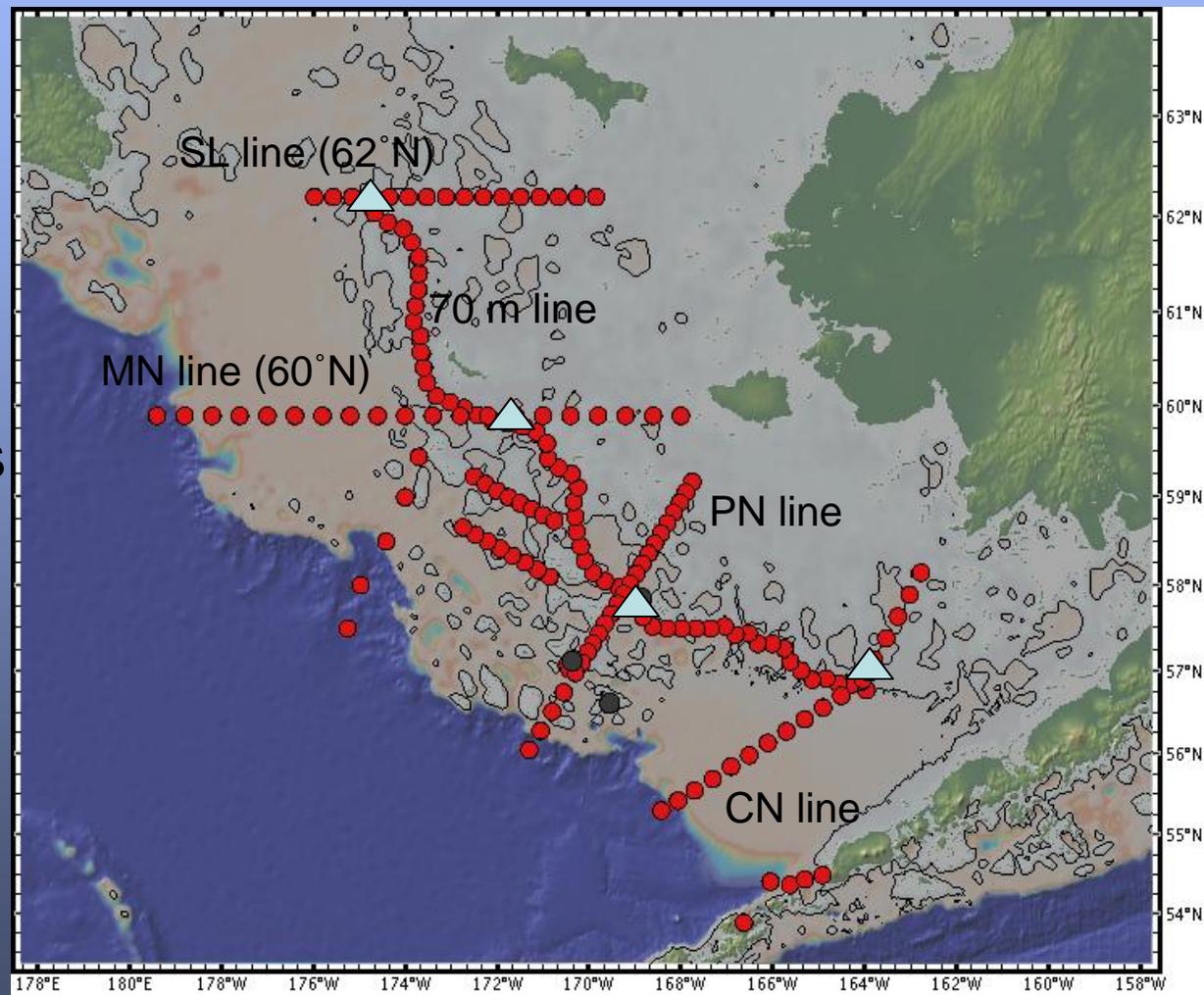


Chief Scientist : Ray Sambrotto, Lamont-  
Doherty Earth Observatory

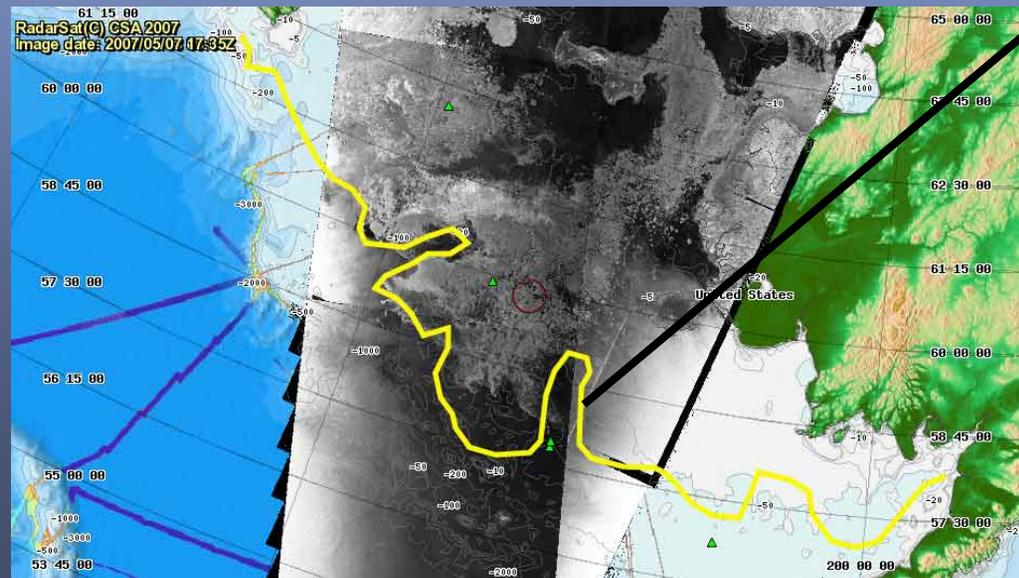
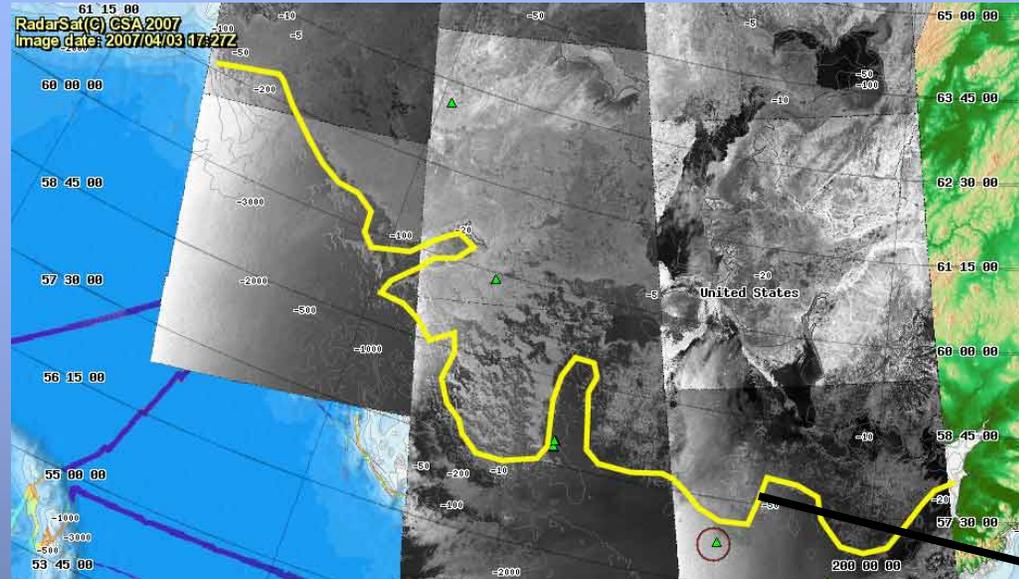


# Major sampling lines on HLY0701 (April 10 - May 12, 2007)

- Major stations
- NOAA moorings

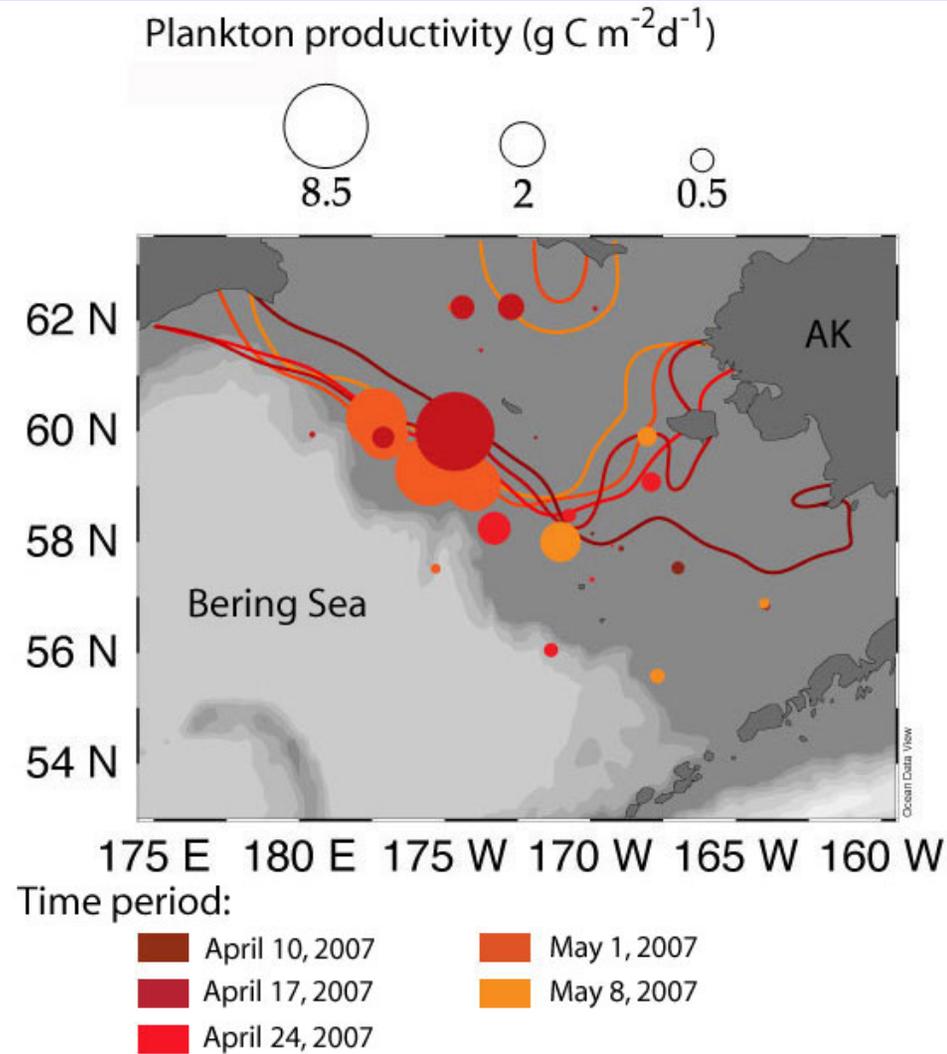


# Ice coverage extensive from early April (top) through early May (bottom)



Approximate  
early April  
ice edge -  
ice retreated  
~2500 km  
over next 4  
months.

Ice edge was site of enhanced biological production and carbon flux throughout sampling.



# Education & Outreach Activities associated with Healy 0701

- Two teachers participated in cruise (1 from NSF's PolarTREC program and 1 from NOAA's Teachers at Sea).
- Teachers interacted with scientists and shore based web managers to update and maintain web sites throughout the cruise.
- Scientists & teachers interacted with local communities via the Aleutian Pribilof Islands Association. Met with students and community members on visits to St. Paul and St. George Islands during cruise.
- Healy 0701 activities can be basis for expanded interaction during subsequent years of the project.

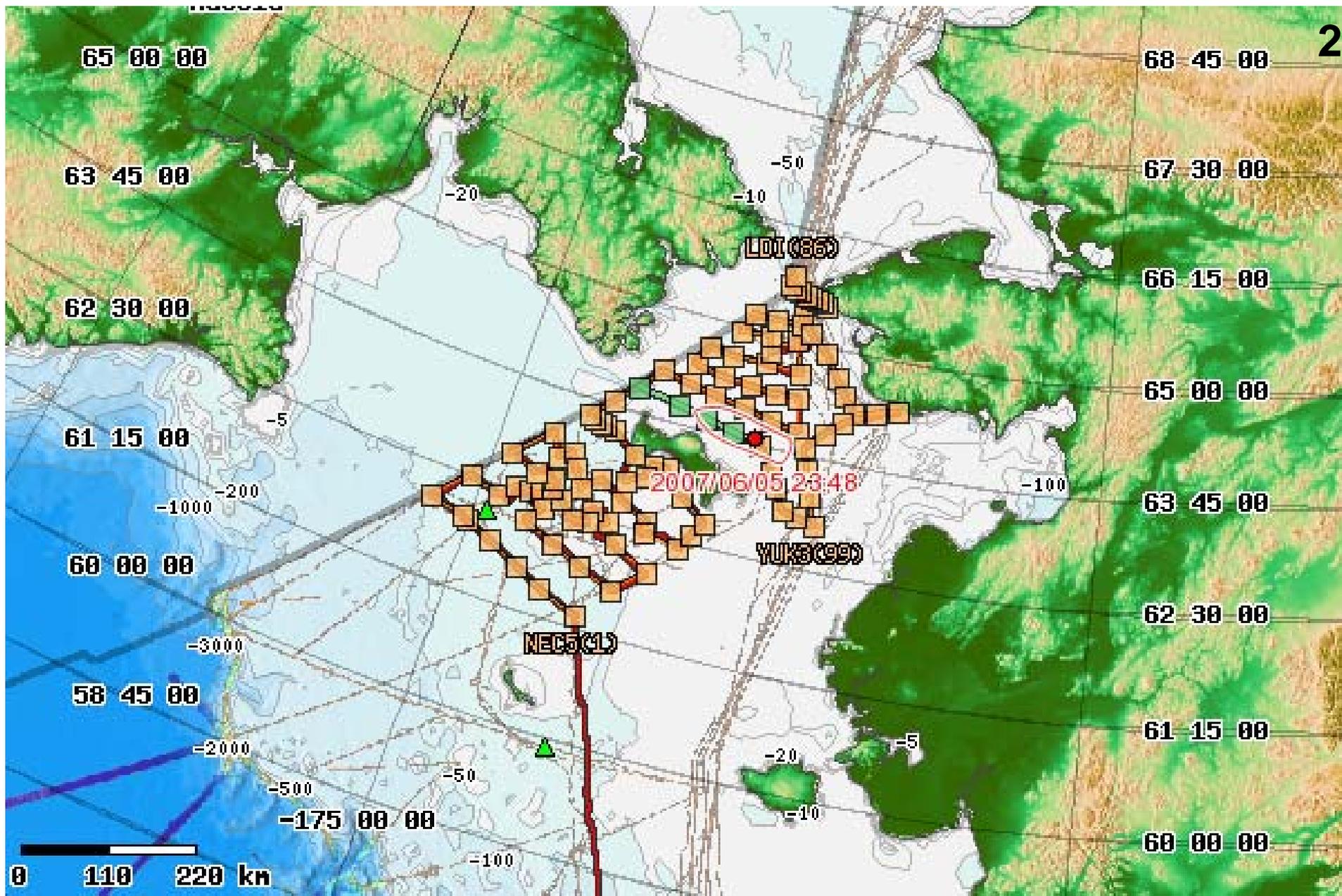


# **HEALY IN 2007: CLIMATE-DRIVEN CHANGES IN IMPACTS OF BENTHIC PREDATORS IN THE NORTHERN BERING SEA**

**HLY 0702: 16 May-18 June 2007**



**Chief Scientists: Jackie Grebmeier, U. Tenn., Jim Lovvorn, U. Wy.**



**HLY0702: May 16-June 18, 2007**

# HLY0702 Highlights

- 40 scientists
- Studied many aspects of pelagic, benthic, and sea ice ecosystem from microbes to marine mammals and birds
- 118 water column stations, 77 sediment stations, areal ice seal surveys, shipboard seabird and marine mammal observations
- Participation of community member from St. Lawrence Island
- Visited communities of Gambell and Little Diomedede
- Hosted Vera Metcalf, Arctic Research Commissioner, and Mayor of Nome Denise Michels for tour of Healy

# Healy in 2007: Law of the Sea Mapping (HEALY 07-03)

Larry Mayer, Chief Scientist

17 Aug.-15 Sept. 2007, Barrow-Barrow, AK

Total Track Length - 5400 nm (10,000.4 km)

Average Speed for survey - 6 knots

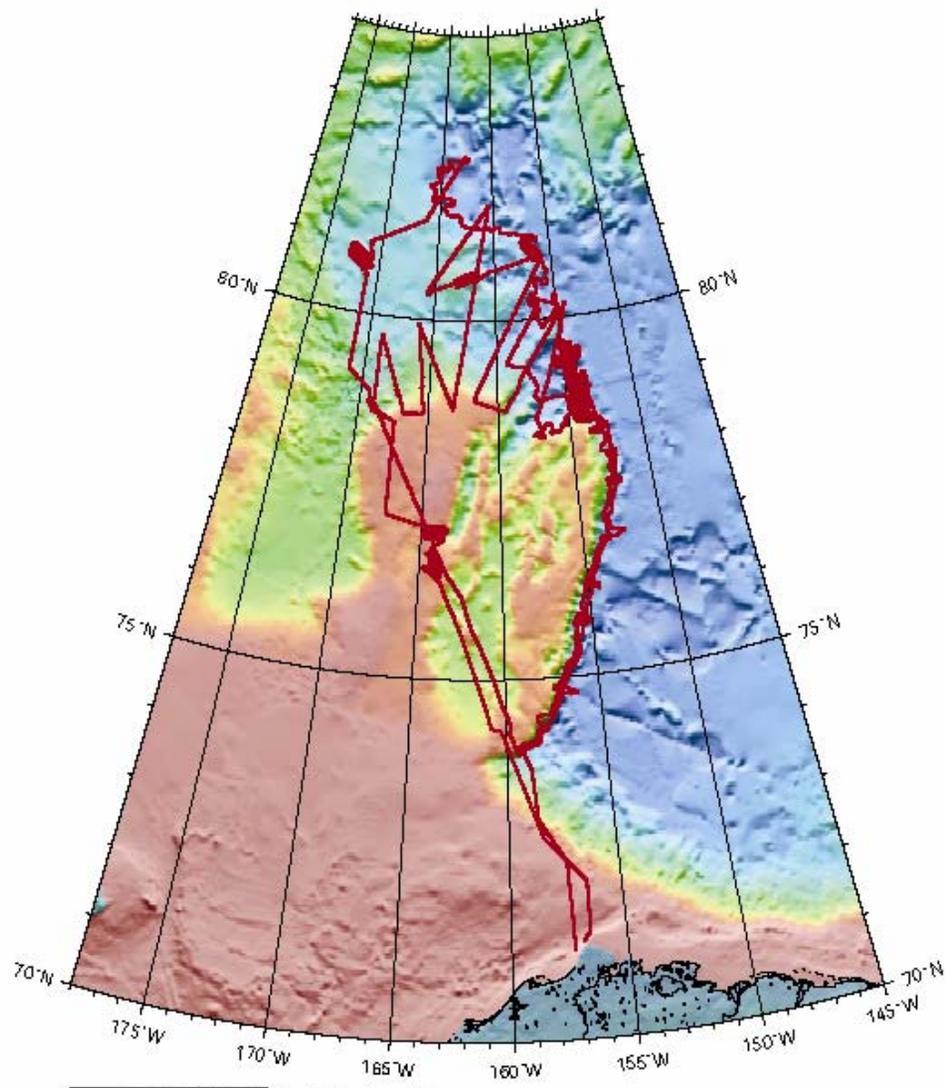
Science Party: UNH-9; UAF-1; UTIG-1;  
NIC-4; UCSD-1;

NG writer, High-school teacher, Comm. Obs.

State Dept - 1 New - 1 Old

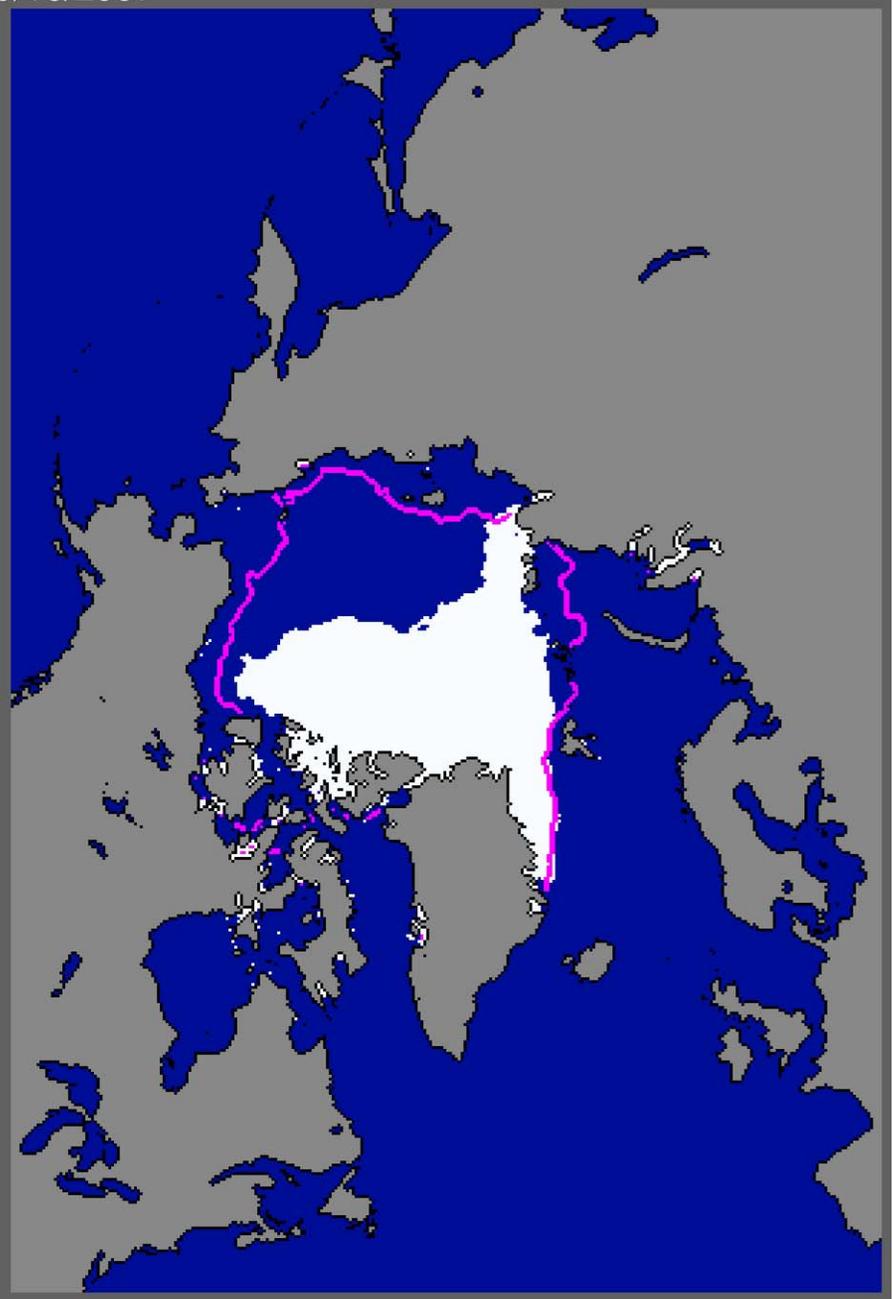


HLY0703 08/17/07 - 09/15/07

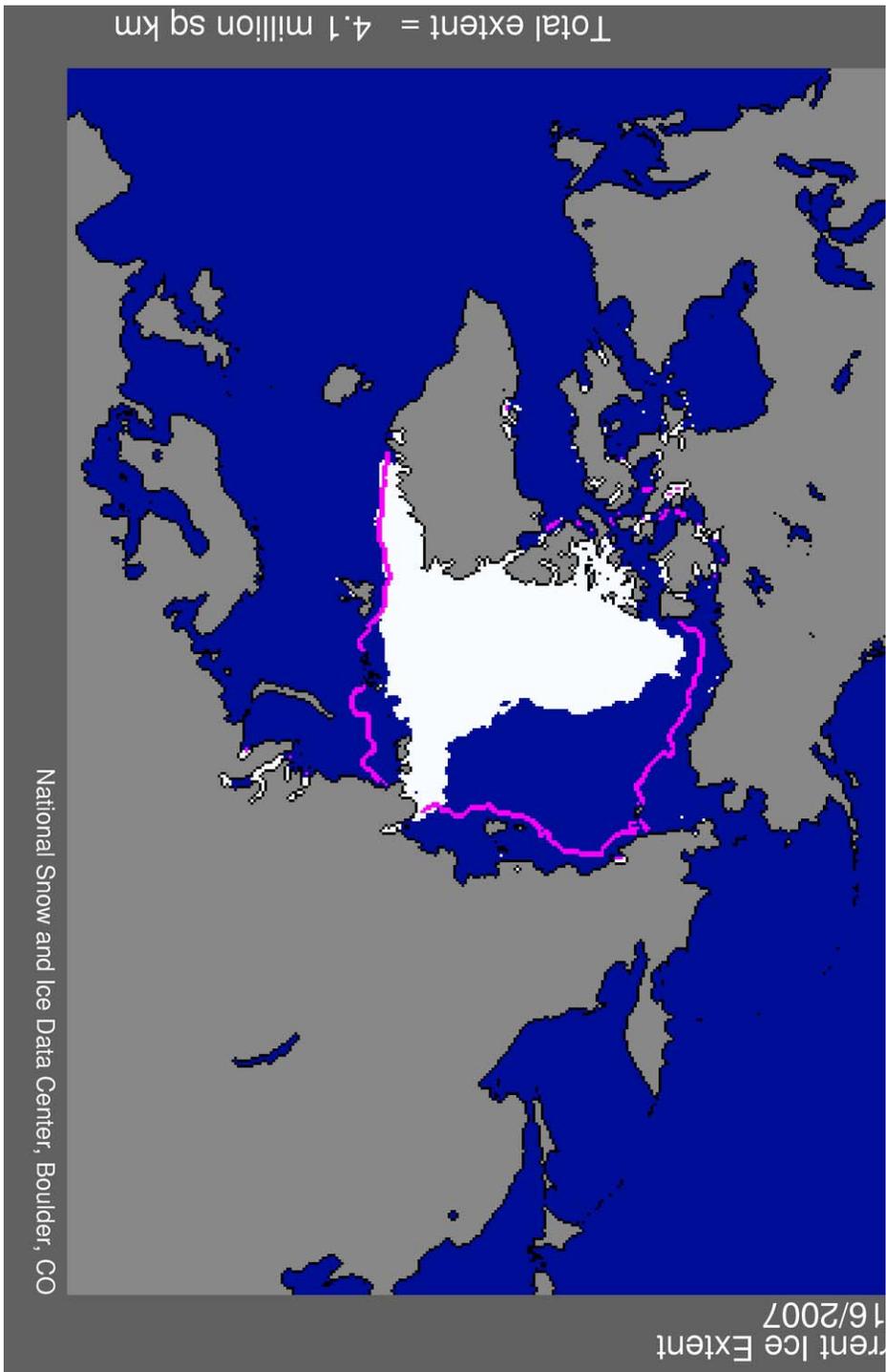
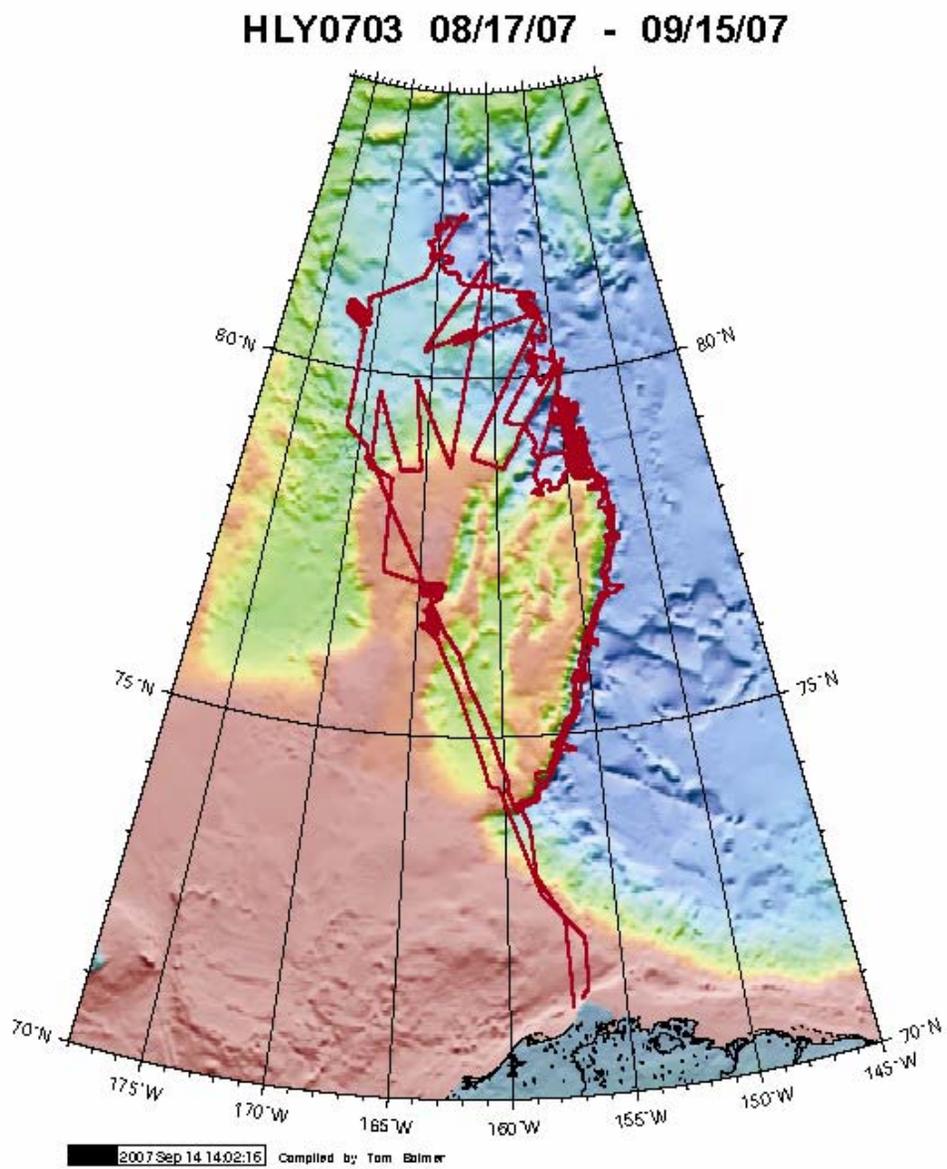


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Current Ice Extent  
09/16/2007



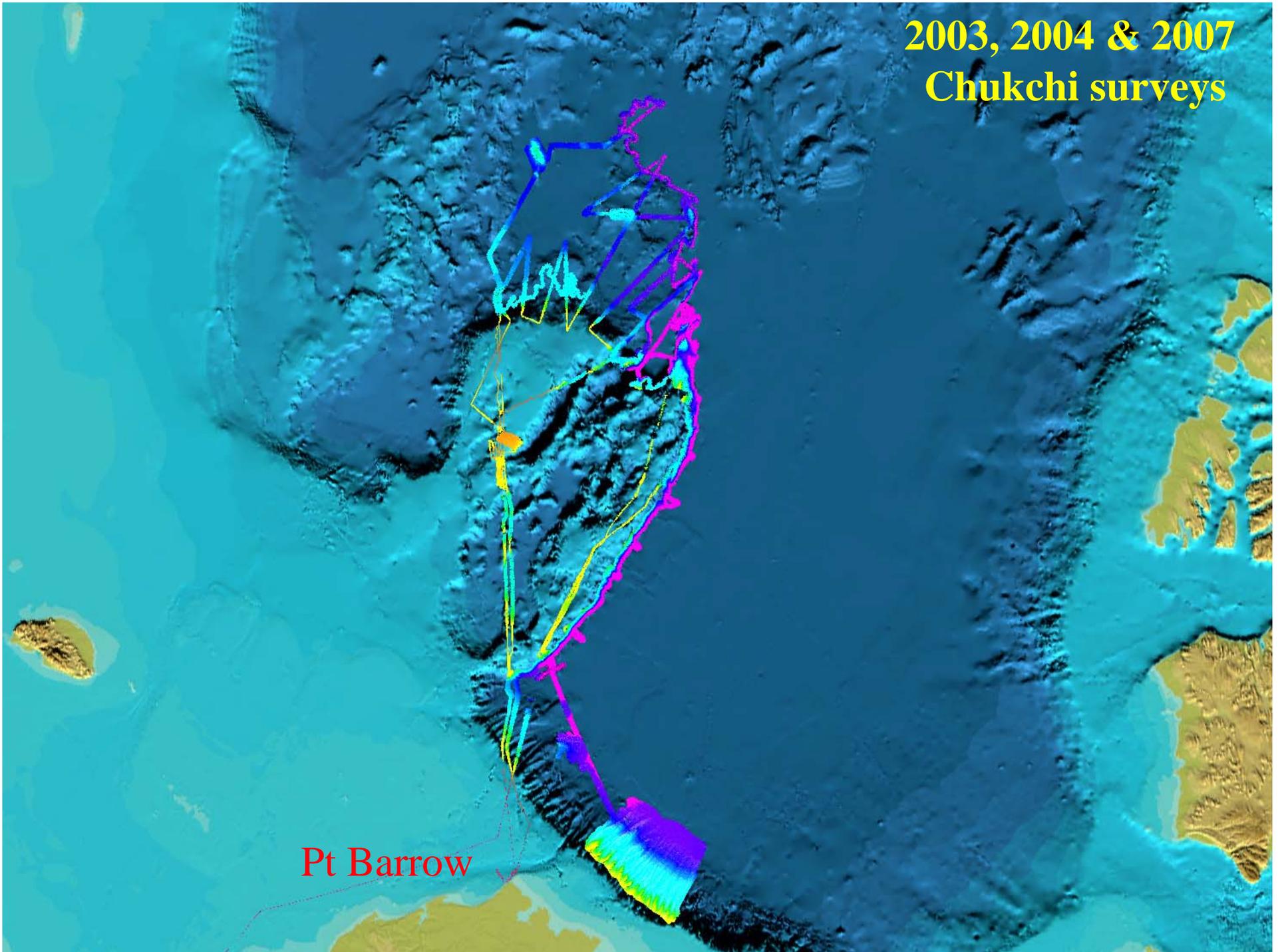
Total extent = 4.1 million sq km







**2003, 2004 & 2007  
Chukchi surveys**



Pt Barrow

# Healy in 2008

- BEST cruises (mid-March-early April; early April - mid May; June-July) in the Bering Sea
- Law of the Sea Mapping in the Arctic Basin (Late Summer)
- Has been requested for short, mooring cruises
- Scheduling meeting later this month

# *Polar Sea & Polar Star*

- Polar Sea conducted Deep-Freeze 2007 with Oden
- Plans for Polar Sea still not set for 2008



# Next for AICC

- November AICC Meeting in Seattle
- De-briefs for the 2007 cruises
- Continue to advise and assist science community and USCG to facilitate doing science on the icebreakers
- Continue to work to improve communication between US icebreaker based research and local Arctic communities, as well as encouraging similar communication between those communities and other large ships (e.g.. foreign icebreakers and cruise ships)
- Continue to watch with interest the future of icebreakers