

2008 Arctic Icebreaker and AICC Activities

Carin Ashjian, AICC Chair

AICC



- Carin Ashjian (Chair)
 - Bernard Coakley
 - Lee Cooper
 - Steve Hartz (RVTEC)
 - Erica Key
 - Kate Moran
 - Robin Muench
 - Don Perovich
 - Dan Schwartz (RVOC)
 - Rebecca Woodgate
- UNOLS Office

Photo by S. Roberts, HLY0402

AICC Activities 2007/2008

- November 27-28 2007 - AICC Meeting at USCG Base Seattle WA
- December 13 2007 - Alaska Eskimo Whaling Commission Meeting, Ashjian (AICC; HLY0802 Chief Scientist) and Captain T. Lindström (Healy)
- Conducted debriefs of Healy 2007 cruises and first two 2008 cruises
- June 3-4, 2008 - AICC Meeting in Arlington VA
- Solicited nominations for and appointed three new members to the AICC (Cooper, Key, Perovich)
- Continued to monitor icebreaker science-local community communication, including establishing communications with the State Department as well as continuing discussions with the AEWC

AICC Activities (cont.) - Recommendation Happy

- As a result of discussions during a late February teleconference and at the November 2007 and June 2008 AICC Meetings, the AICC put forward five recommendations:
 - 1) That the NSF review and define new requirements for medical pre-cruise assessment for science participation and on-board medical expertise for US icebreaker Arctic cruises
 - 2) That the NSF support the proposed replacement of the existing HEALY Seabeam system with a Kongsberg EM122 multibeam system during a planned drydock in 2010
 - 3) That the NSF purchase a laboratory van to be used on the icebreakers, and, when not needed, to be part of the UNOLS van pool.
 - 4) That the NSF and the CG enable Science of Opportunity (SOO) on non-science missions on board POLAR SEA and other icebreakers through open calls to the community
 - 5) That the NSF support upgrades/maintenance to existing science equipment on POLAR SEA and that the NSF continue to support the POLAR STAR in caretaker status until a decision is made regarding replacement or refurbishment of the POLARS. This recommendation required and received UNOLS Council review and endorsement.

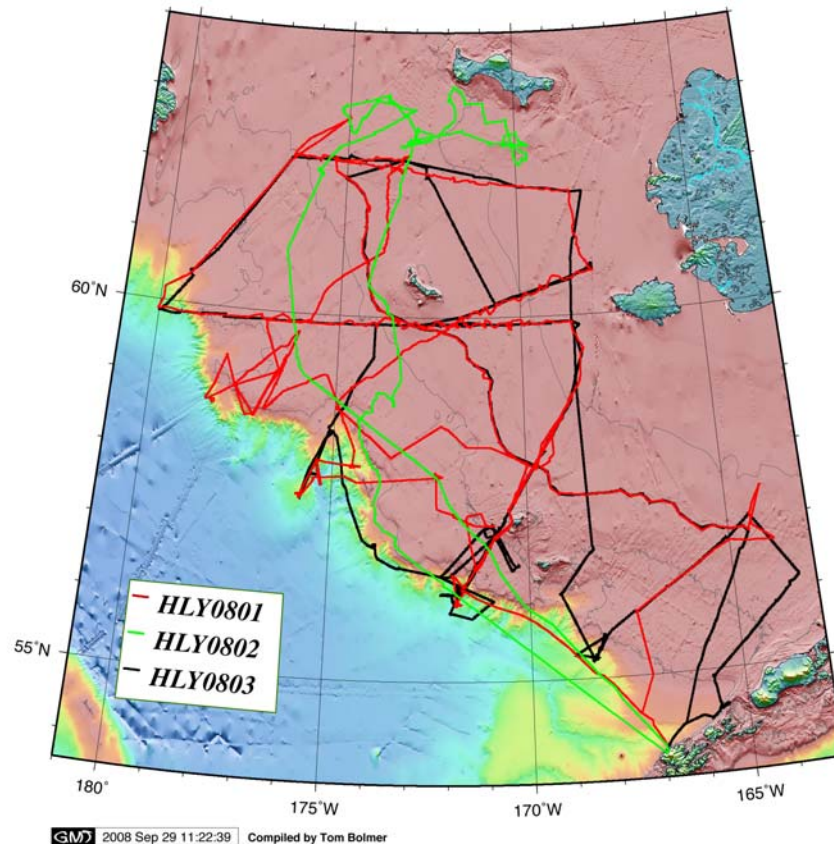
HEALY in 2008: Bering Ecosystem Study (BEST) Cruises

HLY0801: 13-26 March, L. Cooper, NSF

HLY0802: 29 March - 6 May, C. Ashjian, NSF

HLY0803: 20 June - 18 July, R. Sambrotto, NSF

HLY0801, HLY0802, and HLY0803 Cruise Tracks



<http://bsierp.nprb.org/index.htm>





BEST Cruises

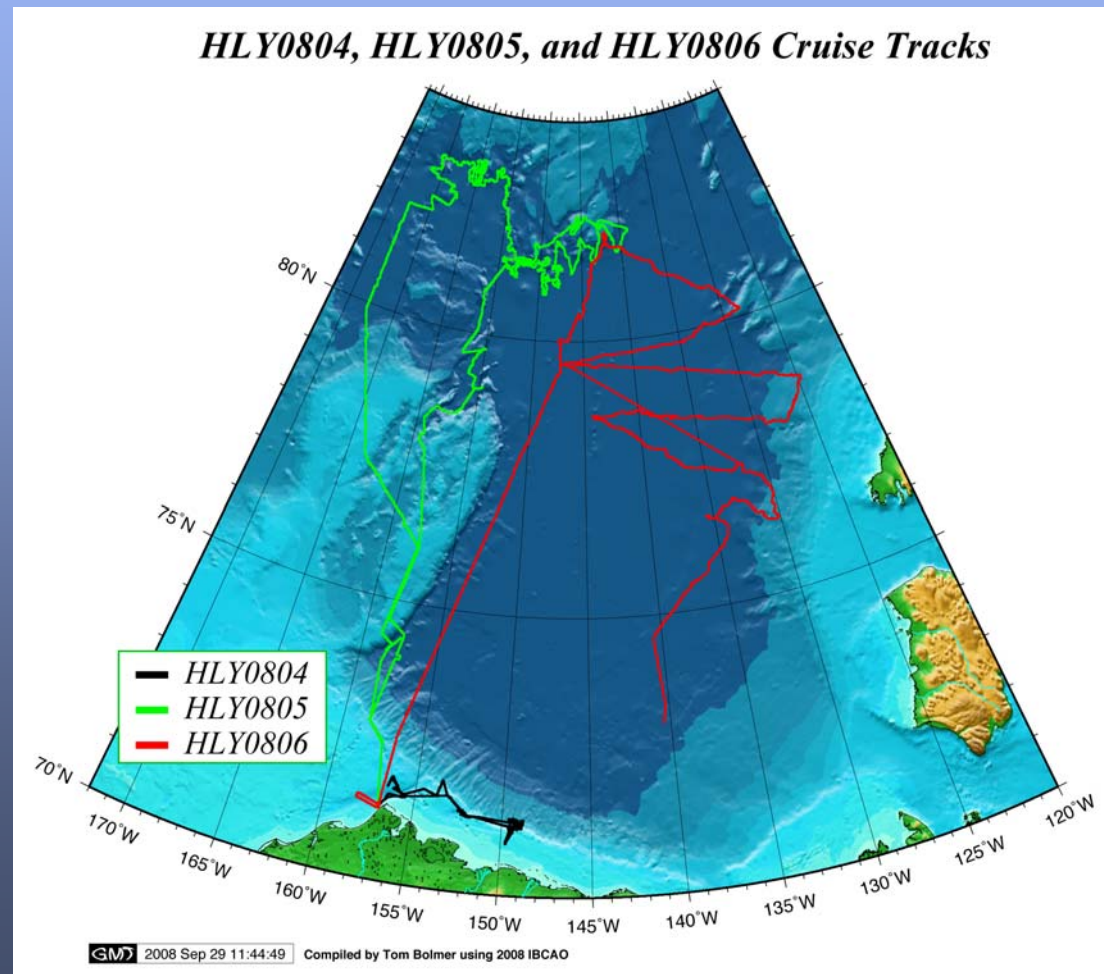
- Up to 14 projects / cruise
- Full utilization of all lab space and science facilities on Healy
- Very successful
- Near full complement of scientists on both longer cruises
- Visits to local communities on St. Lawrence and Pribilof Islands on all three cruises
- Capt. Fred Sommer replaced Capt. Ted Lindström as CO of Healy in June

HEALY in 2008: Arctic Ocean Cruises

HLY0804: 7 - 13 Aug., R. Pickart, ONR/NOPP

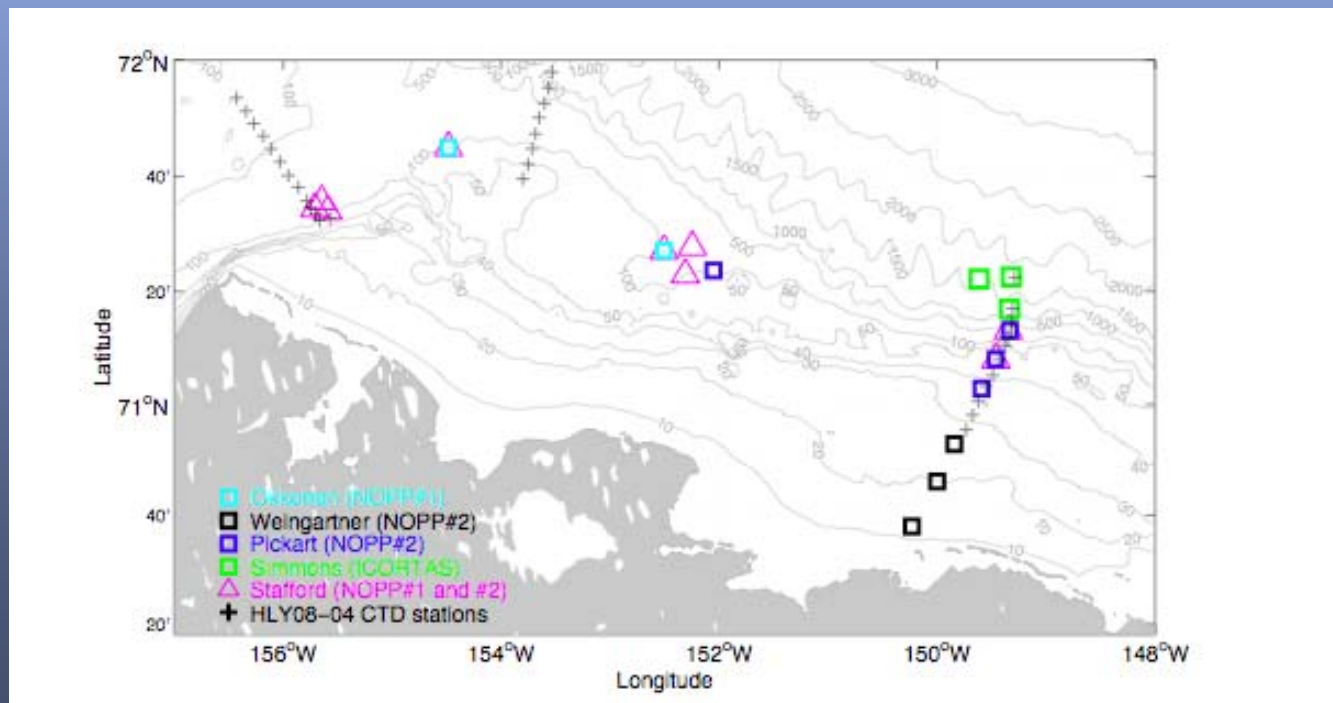
HLY0805: 14 Aug. - 5 Sept., L. Mayer, NOAA

HLY0806: 6 Sept. - 1 Oct., J. Childs, NOAA



HLY0804 - Pickart

- Supported 3 projects (Ashjian/ Okkonen/ Stafford, Pickart/Weingartner, Simmons)
- Oceanographic moorings (9) and moorings equipped with acoustic recorders for marine mammal vocalizations (9 total, 2 on oceanographic moorings) - 16 Total Moorings



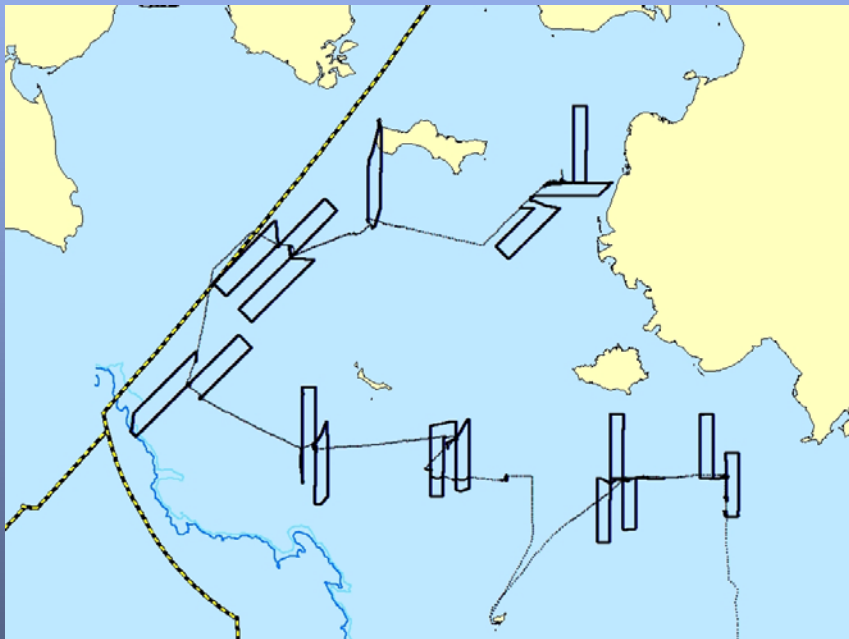
Polar Star

Polar Star remains in caretaker status in Seattle



POLAR SEA IN 2008

Bering Sea: late March-mid-May



LEFT: Ship Track and Helicopter Surveys (grids) during Seal Surveys conducted by NOAA researchers from Polar Sea, April 16 - 27

COAST GUARD SCIENCE OF OPPORTUNITY CRUISE

POLAR SEA

23 Oct – 1 Dec

**Seattle WA – Kodiak AK – Dutch Harbor AK – Seattle
WA**

Bering and Chukchi Seas

- **Capabilities of Polar Sea are limited because her science systems need upgrades, calibration, and /or repair**
 - **For example, no capability to do CTDs or anything with winches at present (over-the-side can be accomplished with cranes)**
 - **Estimates vary from \$125K to \$425K depending on what is done**

Other CG-Science Activities in Arctic

- HAMILTON (white hull): August- September
Marine Mammal Obs., ship and helo - USGS, UAF, WWF
- SPAR (black hull): August-September, Beaufort/Chukchi
Mid-water & bottom trawl net tests - NOAA NMFS
Marine Mammal Obs. - US FWS, NOAA
Test 700MHz wireless in Barrow - NSF BASC
- C-130s: October 2007, March - August 2008
Ice Observations: UAF, U.Colo.
Communications: NSF/BASC, U. Cincinnati
Marine Mammal Obs. - UAF, UW, NOAA, USFWS

Healy and Polar Sea in 2009

- 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)?
- NOPP Mooring Work
- Polar Bear Project
- Support Antarctic Breakout in 2009-10
- Scheduling meeting shortly

Next for AICC

- December AICC Meeting in Seattle
- Conduct de-briefs for the remaining 4 2008 cruises
- Work on our list of Action Items
- Together with Arctic Research Commission, UAF, and CRREL, sponsor Town Hall Meeting at the AGU in December to focus on Arctic Research and Issues
- Continue to work to improve communication between US icebreaker based research and local Arctic communities and between these communities and other large ships (e.g., foreign icebreakers and cruise ships)

Arctic Icebreaker Coordinating Committee Report

October 2008

USCGC HEALY has completed her 2008 science season and is presently transiting from Barrow AK to Seattle WA. HEALY had a very busy schedule this year, with 6 cruises covering 133 days at sea for science and funded by a diversity of agencies. HEALY supported: 1) the NSF funded Bering Ecosystem Study with three cruises to the Bering Sea. 2) Two National Oceanographic Partnership Program projects to install and turn around moorings during a cruise on the Beaufort Shelf were funded by the ONR. 3) Two cruises mapping the seafloor on the Chukchi Cap and the Canada Basin, the latter together with the CCGS Louis St. Laurent that also was acquiring multi-channel seismic data, in support of the Extended Continental Shelf mapping and the Law of the Sea effort funded through NOAA.

Captain Fred Sommers relieved Captain Tedric Lindström as Captain of HEALY in June. Ted was an excellent CO and provided very good service for science. The AICC will acknowledge his contributions at an upcoming meeting.

USCGC POLAR SEA completed a cruise to the Bering Sea in April on which she supported a NOAA seal survey while conducting training and providing experience in ice breaking for the crew. POLAR SEA is on standby to support the ODEN during this year's Deep-Freeze cruise to break out McMurdo Station, Antarctica. POLAR SEA is departing Seattle in late October for a 6-week Coast Guard mission in the Bering and Chukchi Seas for which a Science of Opportunity (SOO) Solicitation has been released. USCGC POLAR STAR remains in caretaker status at the USCG Base in Seattle.

Efforts to foster communication between the icebreaker science community and the local Alaskan communities adjacent to the science study areas continue. The AICC Chair will contact AEWG Chair Harry Brower, Jr. once the 2009 Healy schedule has been determined in order to discuss the cruises for the upcoming year.

The AICC also has been working with the US Department of State to identify a means to communicate advance information to local Alaskan communities regarding upcoming cruises by foreign research vessels/icebreakers in the US Arctic. Early this year, the Department of State (DOS) and NSF agreed that the NSF OPP would serve as the point of contact for such information and facilitate the communication of advance information to local Alaskan communities regarding upcoming foreign cruises in the area. The AICC, DOS, and NSF are evaluating the effectiveness of this approach.

The AICC conducted debriefs of the first two 2008 HEALY cruises in May and will conduct debriefs of the remaining cruises this fall following HEALY's return to Seattle. Based on discussions at the November 2007 and June 2008 AICC meetings and during a teleconference in late February to review science upgrades during the 2010 drydock, the AICC provided the five following recommendations: 1) That the NSF review and define new requirements for medical pre-cruise assessment for science participation and on-board medical expertise for US icebreaker

Arctic cruises. 2) That the NSF support the proposed replacement of the existing HEALY Seabeam system with a Kongsberg EM122 multibeam system during the planned drydock of HEALY in 2010. 3) That the NSF purchase a laboratory van to be used on the icebreakers and, when not needed, to be part of the UNOLS van pool. 4) That the NSF and CG enable Science of Opportunity on non-science missions on board the POLAR SEA and other icebreakers through open Science of Opportunity calls. 5) That the NSF support upgrades/maintenance to existing science equipment on the POLAR SEA so that it is functional and useful for science and that the NSF continue to support the POLAR STAR in caretaker status until a decision is made regarding replacement or refurbishment of the POLARS. This last recommendation required, and received, review and endorsement of the UNOLS Council prior to being submitted to NSF-OPP.

The AICC met in Arlington VA on June 3-4, 2008 and will next meet in Seattle, WA on December 2-3, 2008.

The AICC welcomes three new members to the Committee: Don Perovich replaced outgoing member Rolf Gradinger in the field of sea ice studies; Erica Key replaced outgoing member Peter Minnett in the field of satellite oceanography and meteorology; Lee Cooper replaced outgoing member Henrietta Edmonds in the field of chemical oceanography. Many thanks to Rolf, Peter, and Hedy for their valuable contributions to the committee's work.

The AICC can be reached by writing to the Chair (carin@whoi.edu) or to the UNOLS Office (office@unols.org).

Report submitted by C. Ashjian.