



**USCG Icebreaker**  
*Science Operations*

## WHAT TO EXPECT AS A SCIENTIST ON THE USCGC HEALY

*Rebecca Woodgate and many others ...*



*Welcome to the USCG Icebreaker  
Science Operations Web Site!*

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# **USCG Icebreaker**

## *Science Operations*

**\*\* BASICS**

**\*\* CG/UNOLS DIFFERENCES**

**\*\* THINGS that need doing**



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# USCG Icebreaker

## Science Operations

- ▶ *Icebreakers*
- ▶ *Cruise Planning*
- ▶ *Scheduling*
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- ▶ *Cruise Reports*



Main Website (science and general) [www.icefloe.net](http://www.icefloe.net)

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**USCG Icebreaker**  
Science Operations

U. S. COAST GUARD

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### Healy - Science Support

#### Icebreakers

##### Healy

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- ◆ [Contact](#)
- ◆ [Science Support](#)
- ◆ [Ship Information](#)

#### Healy Science Support - Areas of interest

- ◆ [Science Instrumentation & Sensors](#)
- ◆ [Underway Seawater](#)
- ◆ [Science Labs & Equipment](#)
- ◆ [Coring](#)
- ◆ [Science Winches](#)
- ◆ [Navigation Equipment](#)
- ◆ [Science Network & Computing](#)
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- ◆ [Communications](#)
- ◆ [Bow Tower](#)
- ◆ [Seismics on Healy, HLY0503](#)
- ◆ [Gravimeter Configuration 2004-2005](#)
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[List of Old Instrumentation Files](#)

includes lab layouts etc

Date Last Modified: April 27, 2006

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## **USCGC Healy**

- crew ~ 80**
- science 35-50**
- science equipment  
(see Dale's talk)**
- great work platform**



### **Important to remember:**

- == BIG ship, so lines of communication are very important**
- == COASTGUARD ship, -“top-down” organization**
- crew swaps out every 2-3 years.**

# WORKING WITH THE USCG

- pre cruise

*(red = main  
contacts  
with science)*

## Relevant people on land:

Healy Science Liaison/Science Coordinator - **Dave Forcucci**

NSF-funded Healy technical support – **Dale Chayes**

AICC (Arctic Icebreaker Coordination Committee)

(Other CG liaisons (for the Polars, Phil McGillivray, USCG))

## USCG (Top-down) Hierarchy (as relevant to Science Ops)

**CO – Commanding Officer (i.e. Captain)**

**XO – Executive Officer (second in command)**

**EO – Engineering Officer**

**OPS – Operations Officer**

## **Deck Officers (on the bridge) including**

**MSO – Marine Science Officer – in charge of:**

**MSTs (Marine Science Techs) with titles**

**MSTC (chief), MST1, MST2, MST3 (3=least experience)**

## **Other relevant people at sea:**

**Bosun – (deck operations, usually asked via OPS or MSO)**

**Medical Officer – (medical forms, on-board medical stuff)**

# ARCTIC ICEBREAKER COORDINATING COMMITTEE (AICC)

[UNOLS Charter - Annex VI](#)

Margo Edwards, UH (Chair)	<a href="mailto:margo@soest.hawaii.edu">margo@soest.hawaii.edu</a>
Peter Minnett, RSMAS	<a href="mailto:pminnett@rsmas.miami.edu">pminnett@rsmas.miami.edu</a>
Robert Bourke, NPS	<a href="mailto:bourke@oc.nps.navy.mil">bourke@oc.nps.navy.mil</a>
Henrietta Edmonds, UT Austin (Co-V. Chair)	<a href="mailto:edmonds@utmsi.utexas.edu">edmonds@utmsi.utexas.edu</a>
Carin Ashjian, WHOI (Co-V. Chair)	<a href="mailto:cashjian@whoi.edu">cashjian@whoi.edu</a>
Bernard Coakley, UAF	<a href="mailto:Bernard.Coakley@gi.alaska.edu">Bernard.Coakley@gi.alaska.edu</a>
Rolf Gradinger, UAF	<a href="mailto:rgradinger@ims.uaf.edu">rgradinger@ims.uaf.edu</a>
Rebecca Woodgate, UW	<a href="mailto:woodgate@apl.washington.edu">woodgate@apl.washington.edu</a>
Dan Schwartz, U Washington (RVOC Rep)	<a href="mailto:schwartz@ocean.washington.edu">schwartz@ocean.washington.edu</a>
Dale Chayes, LDEO (RTVEC Rep)	<a href="mailto:dale@ldeo.columbia.edu">dale@ldeo.columbia.edu</a>

<http://www.unols.org/committees/aicc>

To facilitate science on the US Arctic Icebreakers

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## **Contacts:**

*(Ship expects one main person as contact to the science party)*

**Before cruise planning meeting – mostly with Dave/Dale via the Chief Scientist**

**After cruise planning meeting – with Dave/Dale and/or OPS/MSO but good idea to copy emails widely. (Ask the ship how best to communicate with them.)**

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## SCIENCE

### **Nightly planning meetings**

– Chief Sci, CO, XO, EO, OPS, Weather, NSF-tech (Dale ono), plus occasional CO/Science invites, as required for certain operations

**Significant things** – mostly OPS via Chief Sci

**Smaller things** – to MSO(??) and MSTs? (but they may have to ask up the chain)

## SHIP

**Quarters - Daily meeting of ship's crew on heli deck after lunch**

- science welcome, good way of keeping up with what else is happening onboard

## EXPECTED AND UNEXPECTED

- if they lack in experience, they make up for it in enthusiasm
- not the level of science support you get on a UNOLS ship, bring your own spares. If in doubt, ask (Dave/Dale).
- labeling on freight VERY important (many cruise legs a year) – HLY-07-01, plus colour coding
- pager system for scientists and crew
- many people on ship – other activities/ science outreach; hard work keeping everyone informed; white board for daily science, results, where-we've-been?
- science expected to help clean science spaces (materials supplied)
- HAZMAT rules – tighter than airfreight. If in doubt, ask (Dave/Dale).
- Native communities - <http://www.nsf.gov/od/opp/arctic/conduct.jsp> - assistance with this from AICC and NSF – Chief Sci to make contact?
- Other (bed linen, towels, outsized survival suits,)
- ???

# THINGS THAT NEED DOING

= **Cruise name HLY-07-01 (i.e. HLY-year-leg) – mark this on all forms!**

= Cruise Planning Questionnaire – (Chief Scientist)

- as soon as possible (can be modified as things change)
- operational guide – (what science, what operations, loading info, how much freight, science equipment brought with you, science party details, links to native communities, ship equipment required, communications, etc)

= Pre Cruise meeting on the Healy/ in Seattle

– December

- meet with ship's crew
- at least a visit to the ship
- **TECHNICAL** meeting, focused on logistics, bring your technical people

= Medical forms (pdf to be emailed/sent to ship)

= Shipping forms (including HAZMAT information), allowing you to track shipments to the Healy