

Healy and Polar class cruise debrief (Rev 12/2013)

Date of post-cruise teleconference debrief: not applicable

Chief Scientist and contact coordinates:

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Name of Project:

ECS Mapping and Sampling

Name of Ship & Cruise Number:

USCGC Healy 1603

Start and end dates of cruise:

18 Sept 2016 – 06 October 2016

*Please provide comments on the topics and questions that are appropriate for your cruise.
NOTE: This form may be submitted as either a *.doc or *.docx file.*

1) Overall Success of Cruise:

a) *What percentage of the planned science objectives was met during this cruise?*

90%

b) *Please summarize positive and negative factors that impacted completion of the science objectives (for example, personnel issues, equipment performance, ice and weather conditions)*

Negative –

- 1- Many of essential systems (multibeam, motion sensor, synchronization of sonars, etc.) were not functional when we arrived on board (despite assurances from STARC that they were all operational – see separate report).
- 2- Weather and ice conditions were challenging at times
- 3- Communications with HEALY with respect to their plans at end of cruise could have been better

Positive:

- 1- Onboard STARC and USCG IT support and UNH team worked very well together to resolve problems that were resolvable.
- 2- HEALY worked hard to gain time given very tight schedule and long transit distances

2) Pre-Cruise Planning

a) How beneficial and useful is the cruise planning form and the Icefloe web site?

Useful to let all parties know what to expect.

b) Is it clear what is required to be provided to the ship and the schedule for receipt of that information (schedules, lists, plans, forms)?

After 10 cruises I have slowly learned (and am still reminded) what is needed

c) Were the questions on the pre-cruise questionnaire appropriate and easy to respond to?

N/A – this cruise came up as a fill in for a cancelled cruise so did not go through the planning process.

d) Were you able to submit the questionnaire fairly early in the planning process?

e) Did an operations (cruise?) plan get submitted in a timely manner? Was it useful for you and the ship before and during the cruise?

Not really – cruise was scheduled rather late in planning process only after cancellation of another cruise – we submitted as soon as we could but with really only minimal understanding at that point of what our cruise would entail – thus many changes necessary as plans evolved. Appreciate flexibility of all.

f) Do you have suggestions for how the website and questionnaire might be improved?

3) Pre-Cruise Communications

How were pre-cruise communications between the Coast Guard and the Science Party, especially the Chief Scientist? Were points of responsibility easily identified? Were responses to

questions and concerns received in a timely manner? How were communications within the science party and did that impact communications between the Chief Scientist and the CG?

We had several conference calls with HEALY and others related to cruise. I was very comfortable with discussions and clear statements of responsibilities. Only issue was that there was some change in USCG personnel between calls and our arrival but this did not really impact things. All-in-all I was very pleased with pre-cruise discussions and pro-active role (including pushing me to do things) played by MSO on HEALY.

4) Communications and Coordination During the Cruise

How were communications and coordination during the cruise? Were lines of responsibility clear? Were the evening planning meetings effective for communicating information between the Coast Guard and the Science Party?

Each cruise I participate on tends to have a different path for communications (e.g. some cruises comms are done through MSO, others through MSTs, others, through OPS, others directly with CO, etc.). It always takes a few days to sort out what the current HEALY team wants. Perhaps this should be a item for discussion at the first evening meeting – basically tell the Chief Scientist – who they should communicate, course changes, speed changes, etc. to. On HLY1603 it became clear that all comms would go through OPS. Once established this was fine until the very end of the cruise – when it turned out that OPS had plans for departure that we had not been informed of. This became clear at the evening meeting.

5) Environmental Permitting

a) Was any environmental permitting required?

Yes – NEPA categorical exemption required.

b) If so, were these requirements identified at an early date and were there clear means to accomplishing those needs? In other words, how well did it go?

c)

NOAA – Office of Ocean Exploration were aware and took care of efficiently.

6) Communications with Local Alaskan Native Communities

How well did communications between the CG and science and local Alaska Native communities go during the cruise? (Examples: notifications to local communication centers, communications between Chief Scientists and/or CG and entities such as village tribal governments (e.g. IRAs), village corporations, the Alaska Eskimo Whaling Commission and other appropriate wildlife co-management organizations, village whaling captains' associations, and other locally based interest groups.)

This cruise departed Nome and returned to Dutch Harbor – we were nowhere near the native subsistence hunting areas and thus did not involve local folks on this cruise. Our NOAA representative did serve as marine mammal observer.

7) Cargo/Hazmat/Materials Handling

a) How did any and all aspects (scheduling, communication, etc.) of the cruise onload and offload go?

Very well – excellent cooperation from all involved.

b) How did materials handling, including hazmat, go during onload/offload and during the cruise?

Again – all went extremely well.

8) Laboratory and Other Vans

a) Did you use vans from the UNOLS van pool or from another source (specify)?

NA

b) How did the procurement go?

NA

c) Were lines of responsibility clear for obtaining appropriate vans and for setting up and maintaining the vans on board?

NA

d) Was adequate time available to obtain the vans?

NA

e) How well did the vans perform?

NA

f) Were they appropriately equipped with ship connections?

NA

g) How well did load and offload go?

NA

9) Lab and Your Science Equipment Setup/Installation

a) How well did set-up of the labs and science equipment go? For example, were you able to have the lab counters and unistrut adjusted appropriately to fit your needs?

Our needs are limited - we set up computers in the computer lab and the future lab and Jon Wynn set up his Picarro in the mainlab. There was plenty of bench space – we did have a tough time finding appropriate tie-down materials but eventually found enough.

b) Did installation of science equipment outside of the ship's equipment go well? Were there any unexpected surprises in terms of needs or ability to support such scientific equipment? How clearly were special requirements for science equipment defined prior to the cruise?

We had a few surprises with respect to needed data streams (either non-existent or inappropriate) but again with great support from Adam Stenseth and onboard STARC team most of these were resolved.

c) Was anything identified during your cruise that should be recommended as a permanent addition to the ship's science equipment?

A functional MAPSERVER tool

10) Information Technology On Board and On Shore

a) Communications (Local and remote E-mail, account set-up, internet access, data transfer on/off and within ship or between ships, Inmarsat and Iridium, radio). Were you satisfied with the capabilities? Were there computing resources or communications enhancements that you could have used but that were not available on board?

Satisfied.

b) How did the shipboard data collection, management, and archiving go? Were these services provided efficiently and made available in ways that promote rapid transfer of data to users?

Again – Adam provided great support -

c) How well did operational technology work? (Map Server, board of lies, web cameras on board, monitors for changing among closed-circuit cameras, functionality of the closed-circuit cameras on board, winch display on back deck)

MapServer is pathetic compared to past capabilities (see separate report). We work mostly in the computer lab and don't often use board of lies – but Dave Forcucci rigged something to create a

digital board of lies which might be much more convenient. I was not able to monitor cameras in Chief Scientist cabin - -might be my problem but didn't seem to work.

11) Shipboard Science Systems

a) How well did these perform? This includes deionized water, multibeam, winches, environmental chambers, freezers, refrigeration, science seawater, underway data acquisition systems, ADCPs, depth sounders, etc.)

MBES – was not functional when we arrived

SEAPATH was not functional when we arrived

The K-Synch was not functional when we arrived – so we could not operate the ADCPS – we did manage to synch the Knudsen – see separate report.

b) Do you think anything needs to be upgraded?

We resolved a number of problems with MBES but there appears to be failure of more than 20% of xducer array – this needs to be fixed

12) Deck Operations and Deployment/Recovery of Science Gear

a) How well did the planning, understanding of responsibilities and approaches, and implementation go for both science and crew?

No problems with deck operations – only issue was the stopping of the ship and the deployment of an ice buoy during a sonar calibration run (and forcing us to re-do the calibration). This was initiated by another scientist on board who did not check with the Chief Scientist – but the bridge should not respond to requests from people other than the Chief Scientist or his/her designate.

b) Was appropriate and appropriately sized safety equipment available?

Yes

c) Were operations safe? Did everyone comply with safety requirements? Were any unexpected safety issues identified and were they dealt with?

All operations were carefully vetted and safe.

d) Was there enough assistance as needed and/or requested with deployments and recoveries?

Yes

e) Were communications effective with the bridge and winch control during deployments?

Yes with exception of incident described above.

g) Other

13) Ice Conditions

How well was information about the ice conditions in the area of operations provided to the ship and to the scientific party?

We had four folks from NIC so we were well-served for ice information.

14) Small Boat Operations

If appropriate, please comment on:

a) Adequacy of boat briefs

Adequate

b) Provision and availability of appropriate safety equipment

Member of science party could not take part in recovery of glider because there was not appropriate safety equipment (dry suit and helmet). His role was to remove wings – this was though unnecessary but when boat was recovered it took a large amount of time because wings were still on glider. Not sure what the proper solution to this is – it worked out in the end.

c) Identification of science needs and requirements

Fine

d) How well the operations went

OK with exception of delay on recovery as reported above.

e) Other

15) Helicopter Operations

If appropriate, please comment on:

a) Adequacy of flight briefs

b) Provision and availability of appropriate safety equipment

c) Identification of science needs and requirements.

d) Other

16) Food Service

a) How well were special dietary requirements (vegetarian, vegan, low-fat, etc.) identified and met?

Fine

b) How was the quality of service and food, including outside of the three main meals of the day (e.g., (quality and availability of food/experience for those working overnight)?

Food was fine on this leg and we especially appreciated the quality of mid-rats and the enthusiasm of the mid-rats team.

c) Other

17) Berthing and shared spaces (science conference room, gyms, laundry)

a) How did all aspects of housekeeping go?

Fine

b) How did the berth assignments go?

No problems

c) How were the check-in/check-out processes?

Fine

d) Other

18) Medical

a) Were needs, if any, met?

No problems

c) *Medical history questionnaires*

Some of the science party's didn't seem to reach HEALY and several tries were necessary but in the end all were received.

i) *Could the forms be improved?*

I still contend that for remote operations like this a real physical should be required. I was impressed though that they were clearly scrutinized and in one case – a scientist denied. Not complaining – complimenting.

ii) *How did the submission process go? (timing, acknowledgement of receipt, etc.)*

Again – some seem to get lost in initial transmission but eventually all arrived.

19) Other comments (if any)

Appendix – Additional Questions for Specific Activities or Instruments. Answer only if appropriate for your cruise.

1) *Multibeam*

a) *How much real-time watchstander effort was required*

We have 24/7 monitoring of MB

b) *How much onboard ping editing was done in the post-processing?*

We process all data on board.

c) *In both cases, who provided the people? Who was responsible for training the people?*

We provided all watch standers and processors.

d) *Other Multi -Beam issues?*

2) *Diving*

If you conducted scientific diving on your cruise, how did it go?

3) *Operations on the ice*

a) *Were on-ice operation briefings adequate?*

b) *Was appropriate safety equipment provided and readily available?*

c) *Were science needs and requirements adequately identified?*

d) How well did the operations go overall?

e) Other on-ice operations issues?

4) Science Support in Barrow