

From Proposal to Post-Cruise

Responsibilities of a PI/Chief Scientist



TOPICS

- Proposals with ship time
- Cruise science planning
- Cruise logistics planning
 - On the cruise
 - Post-cruise wrap-up

(we will revisit these topics at sea)

photo credits- past CST cruises

The proposal



“Now THAT is a good idea.....”

“But how do I get it funded???”

Is your proposed cruise component
essential to science objectives?

novel?

feasible?

cost-effective?

Could it be an ancillary project?

You will need to show you will make
good use of the capabilities of a
Research Vessel.

✓ Going to sea is essential

Include in your proposal justifications for the essential information in the UNOLS Ship Time Request (STR) form.

1. What ship(s) can accomplish your mission?

A. How big a science party will your project need and support?

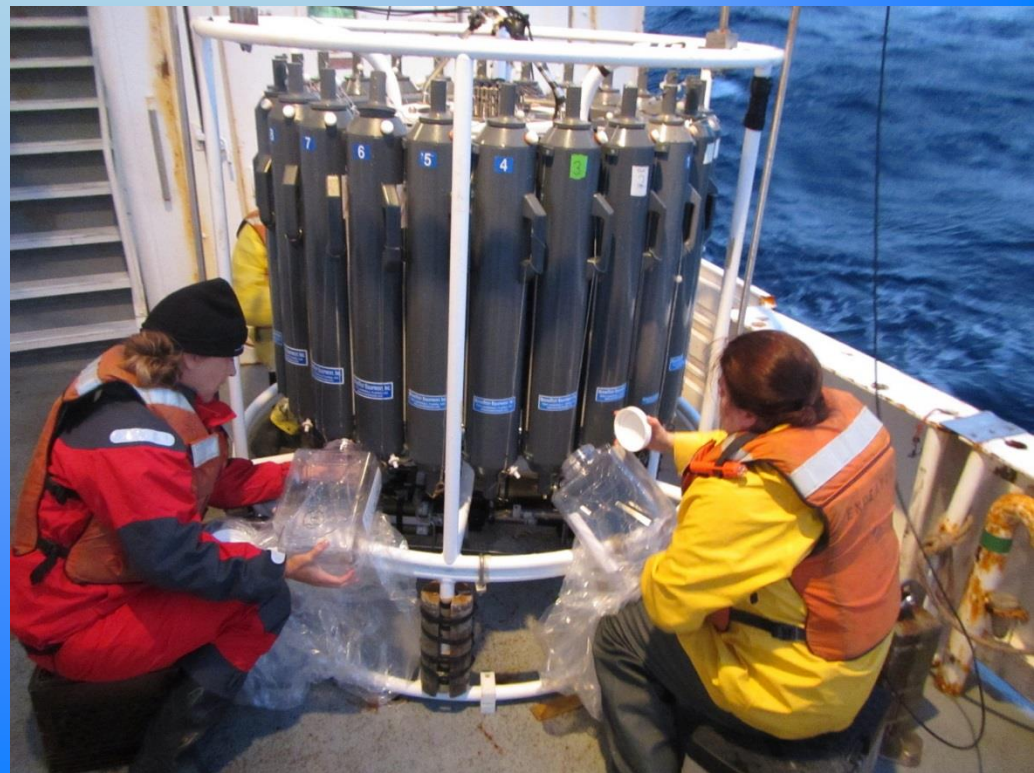
B. What ship's equipment does your research require?
e.g. sonars, winches, lab spaces
(smaller ships are easier to schedule and cost less)

2. What deck, lab and over-the-side equipment does your work require?

Is it part of the ship's scientific equipment or within the UNOLS pools of shared use equipment?

Is it something you can use on loan from a colleague?

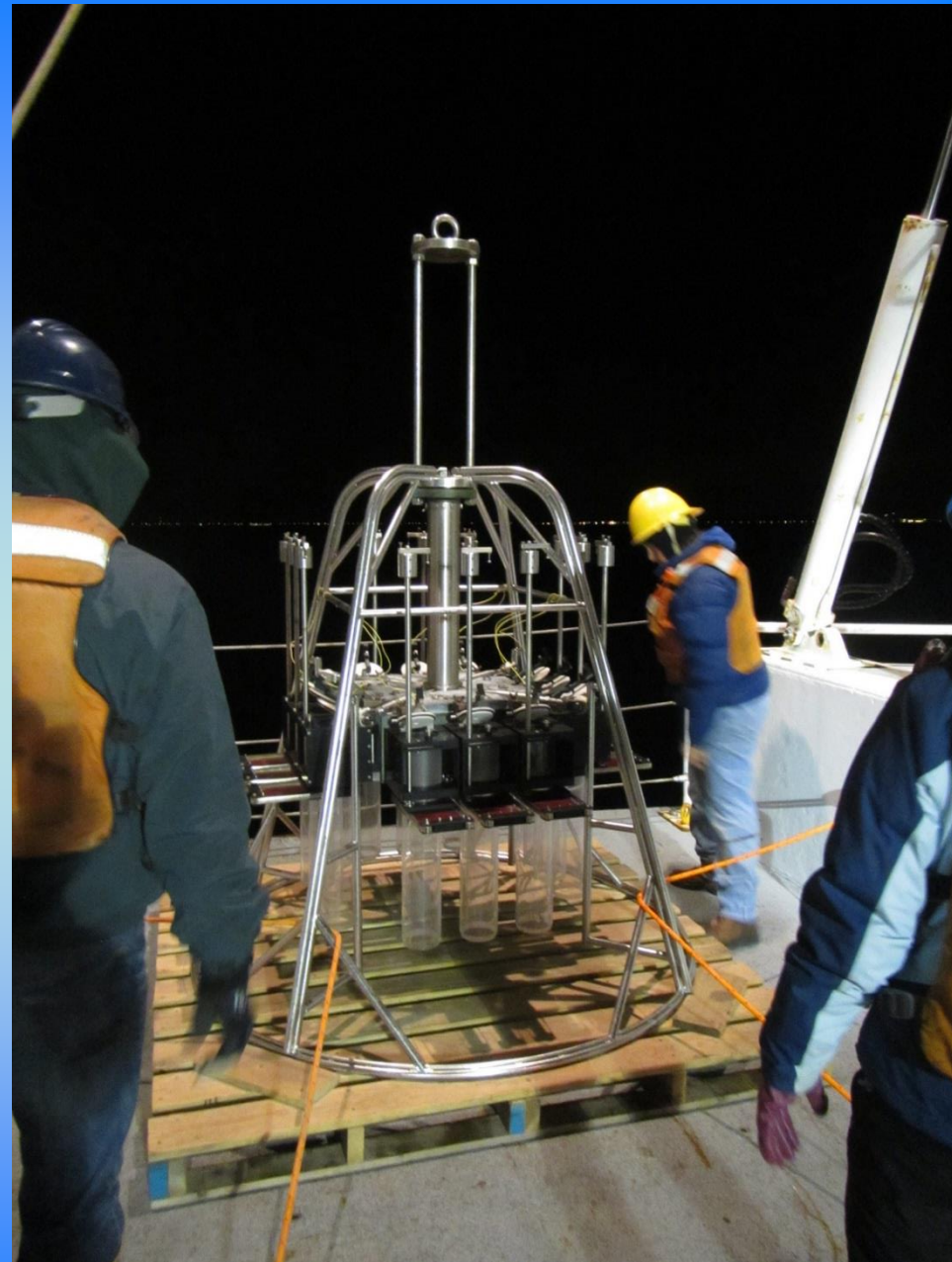
Can you buy it with adequate lead time?



- Include all UNOLS equipment requirements on STR form

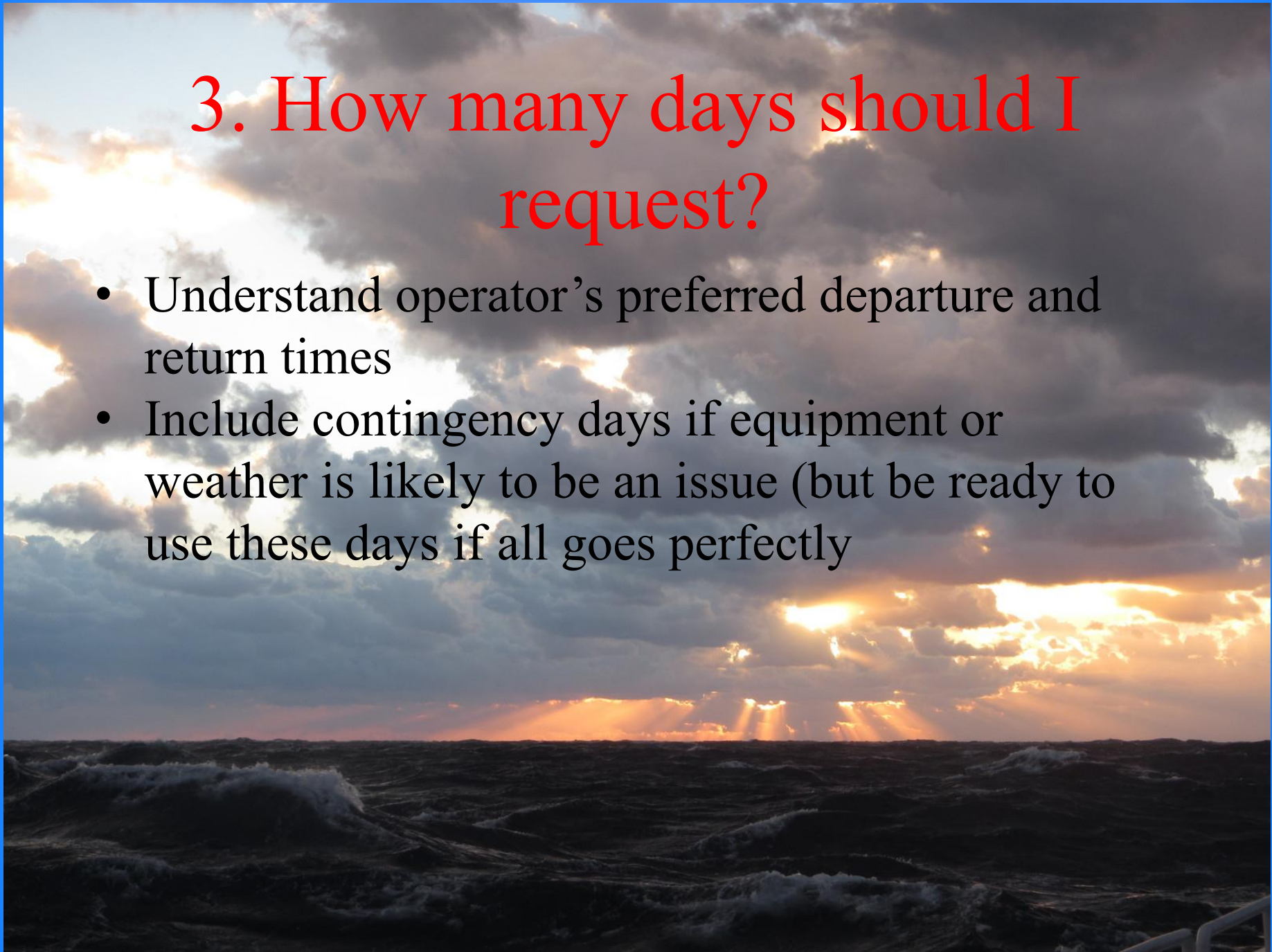
- Carefully plan for loaned equipment with colleagues DURING the proposal stage and include support letters in the proposal

- Carefully budget for equipment resources (including any technical assistance, shipping, over the side insurance)



3. How many days should I request?

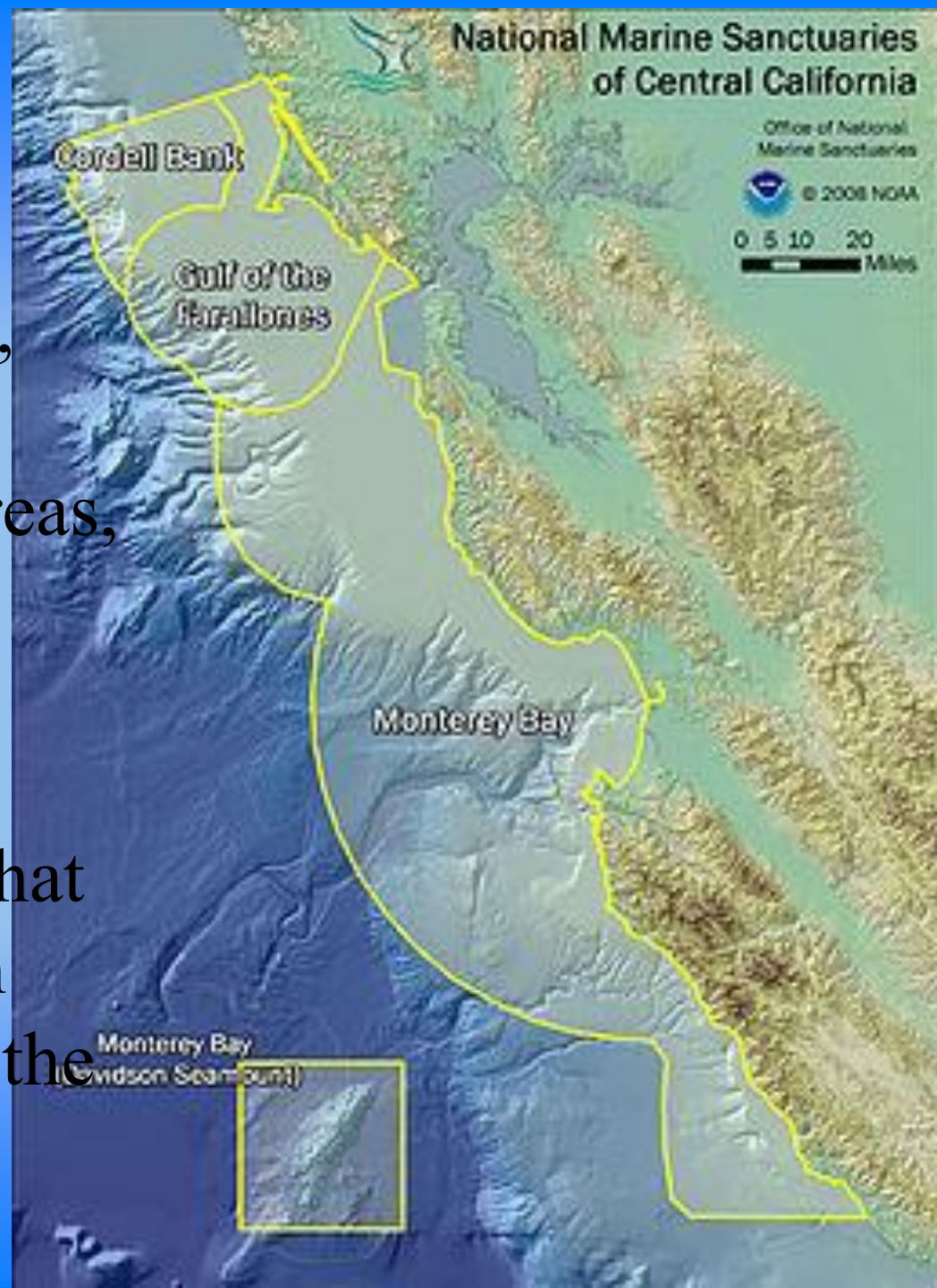
- Understand operator's preferred departure and return times
- Include contingency days if equipment or weather is likely to be an issue (but be ready to use these days if all goes perfectly)



DON'T NEGLECT

planning added
considerations for polar,
foreign cruises, marine
mammal or protected areas,
permits, shipping,
clearances

show in your proposal that
you know your research
local(s) and understand the
logistic requirements



Shiptime requests for global ships

Timing is important (August NSF deadline)

- Communicate with UNOLS and ship schedulers as needed during proposal planning
- Consider combining your cruise with other work proposed/funded in same area (avoid long transits)
- Stay flexible- scheduling may not coincide with your optimal time frame
- Reviewers appreciate indications that you have researched the value added components

My proposal was FUNDED!!!!!!!



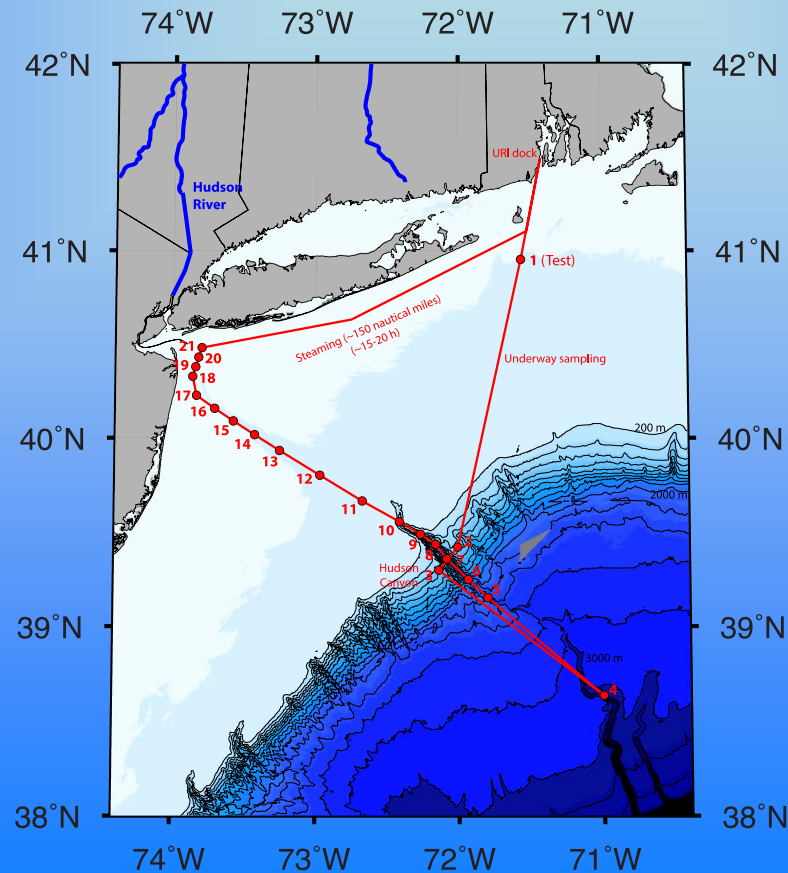
WHA-HOO!

NOW WHAT DO I DO???



ANSWER

- Cruise science planning 101



Develop a Science Team for your Cruise
(the earlier the better!!)

Team spirit and open communications
leads to a more successful and enjoyable
cruise for all

Careful staffing leads to complete
preparations and the accomplishment of
goals



- Are the science activities of my team members complementary and/or synergistic?
- Will there be open berths and/or wire time available for other scientists with interests in your cruise area, students or training opportunities?
(post on UNOLS cruise opportunities page)

Communicate Science Objectives and Cruise Priorities

- Foster communications among Science Team to align sampling objectives and cruise logistics
 - Schedule a pre-cruise planning meeting well in advance, in person if possible
- Develop a primary cruise plan and contingency scenarios collaboratively
 - Follow-up with conference calls

Cruise Logistics Planning

Communicate with Marine Tech and Marine Dept

- closely follow the established cruise planning procedures and timetable for your vessel
- don't be afraid to ask for clarification and assistance in the cruise planning process from the ship operator and UNOLS

START LOGISTICS EARLY

Give plenty of extra time for logistical preparations for polar work, foreign clearances, marine mammal and protected areas considerations, etc.

- discuss in detail your cruise equipment needs with Marine Tech

(DO **NOT** JUST ASSUME IT WILL BE THERE!)

- deck (winches, wire needs)
- instrumentation (CTD/sensors, sampling bottles)
- lab (fume hoods, laminar flow hoods, fridge/freezer space)
 - navigational needs
 - other (transducers, special computing needs?)
 - vans

- provide specifics about any PI supplied equipment and instrumentation

- over-the-side equipment may require special planning
 - lab equipment

There are many on-line resources to help logistics planning for your cruise

http://shipsked.ucsd.edu/Schedules/Instructions_For_Scientists/

KNOW your equipment to
prevent surprises

- If you plan to use any UNOLS Shared-
Use equipment or Pooled assets

discuss your plans with person responsible for this
equipment ASAP and reserve it as soon as the cruise
dates are set

Familiarize yourself with your equipment
and its setup
BEFORE the cruise (all PIs)

How will you deploy it?

How and where will you secure it?

Put together a spares box!

Bring your own tools, tape, hardware etc!

PREVENT SURPRISES AND SAFETY PROBLEMS

Discuss with other PIs the equipment
they plan to use and procedures

In a few cases, you may need to arrange that PIs
bringing unusual equipment discuss their operations
and needs directly with the Marine Tech (especially
true for any user-supplied wire or atypical over-the-
ship operations)

The Chief Scientist shares
responsibility for science party
safety and behavior with Master

Ensure you have ALL important
medical information from all
members of the science party

Maintain an awareness of any
medical issues or dehydration
from extreme seasickness

Communicate Safety and Cruise Protocols to Science Party IN ADVANCE

(esp. any verbotims)

- During the cruise planning pre-cruise briefing
 - During the safety meeting
 - On the cruise as needed

Ensure your science party reads
the UNOLS safety manual

http://www.unols.org/publications/manuals/safe_man.html

During the cruise

Know and keep faithful to thy
(Ever Evolving)
Cruise Plan and Priorities

Keep thy balance!

- Ensure each science party accomplishes its #1 priority
- Evenly plan for and communicate all issues requiring cruise adjustments
 - Hold ~daily science briefings with science teams

COMMUNICATE WITH CAPTAIN ON ALL MAJOR SCHEDULE CHANGES

- the point person to communicate all minor operational changes is generally the bridge officer on watch
- Post all updates to the cruise plan without delay
- designate a centralized point for posting schedule changes to science party

Other considerations

- Especially on long cruises-plan for recreation time, breaks from work, fishing
- Invite captain and interested crew to regular science meetings. Explain what you are doing and why.
- Visit the bridge often but during non-critical times operationally.
- SAFETY CAN NEVER BE COMPROMISED. The captain is in charge, even though you are the chief scientist.

MAINTAIN FLEXIBILITY, OPEN
MINDEDNESS AND
GOOD HUMOR ABOVE ALL!!

Post-cruise wrap-up

- Post Cruise Assessments (PCA)
- Post cruise report
- Post cruise science meeting
- Data Sharing Requirements

Post Cruise Assessments (PCAs)

- Completed by Chief Scientist, Master and Marine Techs
- PCAs provides important feedback to agencies on ship operations, technical support and scientific equipment
- PCAs help to provide guidance to UNOLS on ship-related issues, cruise planning and strategic fleet planning
- Provide CONSTRUCTIVE PRAISE and CRITICISM/SUGGESTIONS NOT complaints

Post-cruise report

- some ship operators have specific cruise report outline to follow
- an effective structure:
 - 1) Overall cruise narrative
(Chief Scientist/ Science Team leaders)
 - 2) Cruise participants
 - 3) Each PI: -1-2 para on objectives and cruise sampling protocols/methods
 - Table of samples collected
 - Ship-data streams collected
 - Data archiving summary

Plan for a post-cruise meeting

very useful to build on cruise
collaborations and science
synergies

- may want to consider meeting at a conference

Data Sharing and Reporting

refer to NSF

Division of Ocean Sciences
Sample and Data Policy

be aware of Program specific requirements

Recap-Common Mistakes

- Last minute preparations
- Trying to do too much with too few people
- Inadequate spares, supplies and contingency plans
- Poor equipment designs: recovery systems, tracking aids
- Poor or confused communications
 - (who, when, what, where?)
- Ignoring regulations, authority of ship's master
- Not taking the time to properly check over equipment
- Not checking charts and data bases for critical information, e.g. bottom type, currents, shipping lanes, protected areas



Problems

- Equipment failures-ship and science (learn to take in stride)
- Loss of time due to weather
- People problems
 - Drugs, alcohol (especially in port)
 - Illness
 - Injury
 - Hazing, sexual harassment and flirtation
 - Aggressive and pushy “collaborators”
 - Difficult captains
 - “The totally unexpected”
 - Mistakes happen



WHY it is worth it

- Leadership-setting the direction of ocean science
- Exploration
- Discovery
- Friendships
- Education
- Travel

