Marine Science Drivers for the Polar Regions

UNOLS Polar Research Vessel Workshop
February 28, 2011 & March 1, 2011

http://www.unols.org/committees/fic/smr/PRV/index.html

Polar Research Vessel Committee (PRV)- Established Dec. 2010

- Review Science Mission Requirements from PRV Study completed in 2006
- Assess if 2006 SMR's meet current and emerging needs for Polar Research
- Consult existing UNOLS/SMR's for Ocean & Regional Class ships
- Develop a survey to gather feedback
- Prepare an Interim Report for NSF by June 2011, with a final report in late 2011.

Polar Research Vessel Committee- PRV

Rob Dunbar/Stanford- Chair
Hugh Ducklow/MBL
Vernon Asper/USM
Carin Ashjian/WHOI
Larry Lawver/UTexas
Dale Chayes/LDEO
Doug Russell/UW
Dan Oliver/UAK
Maria Vernet/UCSD
Eugene Domack/Hamilton
Bruce Huber/LDEO
Craig Smith/UH

SMR's

- Enhanced ice breaking capabilities -4.5 ft level ice @ 3 kts
- Increased Endurance to 80 days
- Increased accommodation and lab space for 50 scientists
- Moon Pool for drilling. ROV's & AUV's, etc..
- Ability to tow nets and research instrumentation from the stern during ice-breaking
- Acoustically quiet vessel with hull form designed for installation and operation of remote sensing instruments
- Helicopter Capable
- Long Coring System Capable
- Box Keel Design for Transducers
- "Greener" Ship
- Portable Lab Vans- 5-6
- Microscope Rooms (2) & Environmental Rooms (2)
- Walk-in Freezer

SMR's

- Easy Access in hold to containers
- Large Otter Trawl 2-point Winch System

Antarctic Marine Geology/Geophysics Workshop- March 2002

- Continued oversight of vessel plans, design, construction and testing by research scientists with appropriate technical expertise
- Addition of more "sea-worthy" small boats
- AUV/ROV Handling Systems & Garage Type work space
- Increased refrigerated storage and core processing capabilities
- Consideration for "logical" pathways for moving equipment
- Increased flexible lab space
- Separation of permanent computing facilities
- Plan for long-term archiving of swath mapping data.

SMR's

Antarctic Oceanography Planning Workshop-June 2002

- Capable of new technologies for Marine Molecular Biology- Gimbaled platform/lab space for centrifuges/electrophoresis equipment
- Aquarium Space
- Trace-Metal Clean Molecular laboratory
- Scientific Community should be involved in entire process.
- Internet Capable
- Excellent open water capabilities

Feb 28, 2011 Monday-

Workshop Facilitator and PRV Chair- Rob Dunbar/Stanford & PRV Committee set the tasking, timeline, workshop purpose, scope, expected results

NSF Opening Remarks- Dr. Karl Erb/NSF/OPP Director-

NSF Program Office- Alex Isern, Hedy Edmonds, Lisa Clough, Tim McGovern
Historical Review, Path Forward, PRV Timeline

James St. John- Science & Technology Corp. – Review of PRV Study- Operational Feasibility of desired features and specifications that impact ship size and cost.

Review PRV Community Responses from 2011 Survey

Developing Science Drivers- Breakouts Groups

- Biological Oceanography-Maria Vernet/Craig Smith
- Chemical Oceanography-Vernon Asper
- Physical Oceanography & Atmospheric Interactions-Dale Chayes/Bruce Huber
- Marine Geology and Geophysics-Larry Lawver/Gene Domack

March 1, 2011 - Tuesday

Translating Science Drivers into Science Mission Requirements

- Overview of UNOLS SMR Process- Annette/Jon-UNOLS
- Purpose & Background
- Developing SMR Table & Elements of SMR
- Vessel Mission Statement, Prioritization, Mission Scenarios
- Review of existing SMR's and current planning activities

Direction Forward and Next Steps

- Questions/Comments
- Priorities
- Intersection of science
- Request for short reports & future contributions

Open Discussion & Written Inputs

Workshop Adjourn

PRV Committee Working Lunch

PRV Committee- Recover information, begin writing report

Next Meeting May 5 & 6, 2011- PaloAlto, CA

http://www.unols.org/committees/fic/smr/PRV/index.html

R/V SIKULIAQ Keel Ceremony 11 April 2011

R/V SIKULIAQ Keel Laying 11 April 2011

R/V SIKULIAQ SCIENCE PROPOSALS

Science Community Workshops- May 10 & 11 in Marinette and at Ocean Sciences in Salt Lake City 2012

NSF Proposals for OCE/SIKULIAQ- Aug 15, 2011,allows for resubmission for Feb 15, 2012, Aug 15, 2012, Feb 15, 2013 &

OPP Oct 18, 2011, Oct 18, 2012, Oct 18, 2013

January 2013- Global Ship Scheduling Meeting