

Status of NSF Fleet Renewal Activities & Related Programs



RVOC Meeting
April 2006

Status of NSF Fleet Renewal Activities

	MARCH 2004	MAY 2006
ARRV	Approved MREFC funding in a future NSF budget.	DEC 2004, design completed. Funds requested in FY 2007 Budget to Congress.
RCRV	NSF proposes to take the lead in construction of 3 ships advocated in the 2001 FOFC plan.	OCT 2004, NSF signed an acquisition strategy with NAVSEA. APR 2005, two design competition contracts selected.
SEISMIC SHIP	Proposal submitted to acquire a 3-D seismic industry vessel.	R/V <i>Ewing</i> retired. R/V <i>Langseth</i> acquired and in shipyard for modifications.
RHOV	Proposal submitted to design and build a replacement for the DSV <i>Alvin</i> .	Project in 3rd Year of a 6 year design and build process.

Alaska Region Research Vessel (ARRV)



R/V Alpha Helix



ARRV



Timeline for ARRV Acquisition

- June 2006 - Competitive solicitation issued for Cooperative Agreement for construction and operation
- Sept – Nov 2006 - Proposals reviewed
- Jan 2007 - NSB approval sought to award Cooperative Agreement for construction (\$98M) and operation of ARRV

Regional Class Research Vessels

- Early FY 2007: Board Approval will be sought for expenditure of R&RA funds not to exceed \$15 million in any one year over six years.

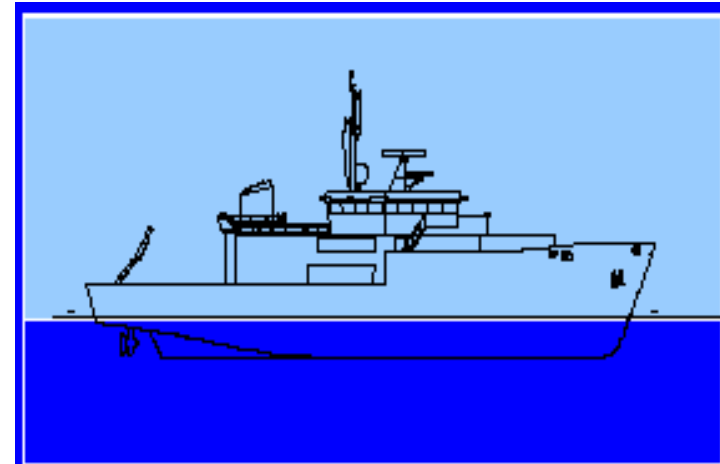
- Ship Acquisition and Operator Selection Timeline:

Phase I:

- October 2005 – NSF/NAVSEA signed Acquisition Strategy MOA
- October 2005 – Design Competition RFP released
- January 2006 – Deadline for receipt of proposals
- April 2006 – Two design teams selected
- September 2006 – NSF issues solicitation for Operator of first ship
- January 2007 – Deadline for receipt of expressions of interest
- April 2007 – NSF selects Ship Operator

Phase II:

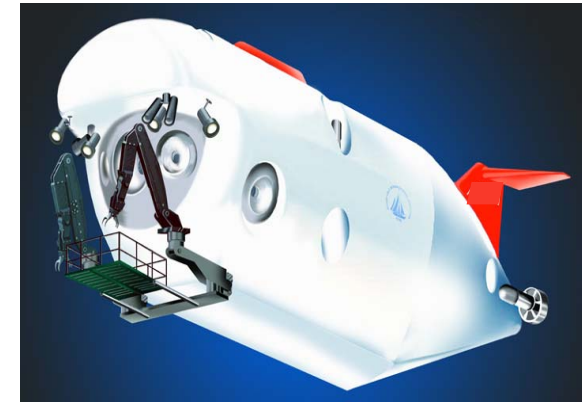
- May 2007 - Select winning design/contract
- June 2007 – 2013: Consecutive 3-ship construction/outfitting



HOV Replacement

Phased Development Approach

- **Phase I** (in progress):
 - Oversight Committee established and active in design process
 - NAVSEA remains involved with design technical aspects
 - Contract finalized (October 2005) between WHOI and Southwest Research Institute (SwRI) for the design of the **personnel sphere**
 - Solicitation for **vehicle** being prepared
 - Development Issues:
 - Sphere:
 - Limited vendors – 4 possible forgers
 - Titanium price increasing due to limited availability
 - Syntactic foam – 32 cu ft vs 31 cu ft
 - Batteries –Lithium Ion currently testing
- **Phase II** (**dependent on Successful Phase I**):
 - Vehicle construction



UNOLS Subcommittee developing safety guidelines for certification and operation of academic submersible Human Occupied Vehicles (NOAA/NSF sponsored)

R/V LANGSETH

- Seismic vessel purchased August 2004 (\$6.2M), renamed the R/V MARCUS LANGSETH
- R/V MAURICE EWING sold September 2005 (\$5.5M)
- Conversion Oversight Committee active in modification designs
- UNOLS Science Oversight Committee formed
- Vessel currently in shipyard for modifications
- Seismic science equipment purchased (\$6.0M)
- Vessel anticipated to be in service in 2007
- Budget:
 - FY2004 - \$6.2M
 - FY2005 - \$8.0M
 - FY2006 - @\$2.0M (Final Payment)



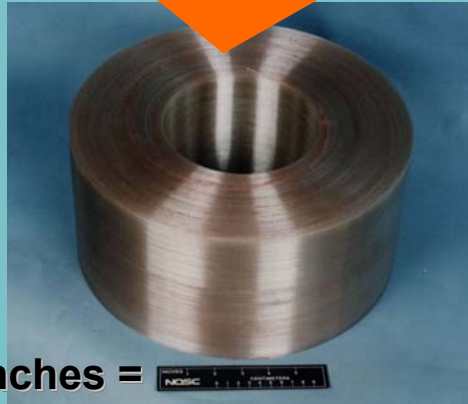
HROV

- Hybrid Remotely Operated Vehicle (HROV), capable of operating in ROV (tethered) and AUV (untethered) mode
- Multi-agency Developmental Program (NSF, NOAA, Navy)
- Sea trials scheduled in early 2007
- Vehicle Characteristics/Technology:
 - 11,000 meter depth capability (full ocean depth)
 - Microfiber Optic Tether for real-time data transmission (Navy technology)
 - Positive results from Fiber optic testing in early December 2005
 - Flotation – High performance ceramic pressure casings
 - Energy Storage – 2000 small pack, rechargeable Lithium Ion batteries
 - Lightweight/Small Vehicle – Allows for deployment from Intermediate, Ocean and Global Class size ships
 - Sampling Capability, 75lb payload
 - Mission duration = 36 hours



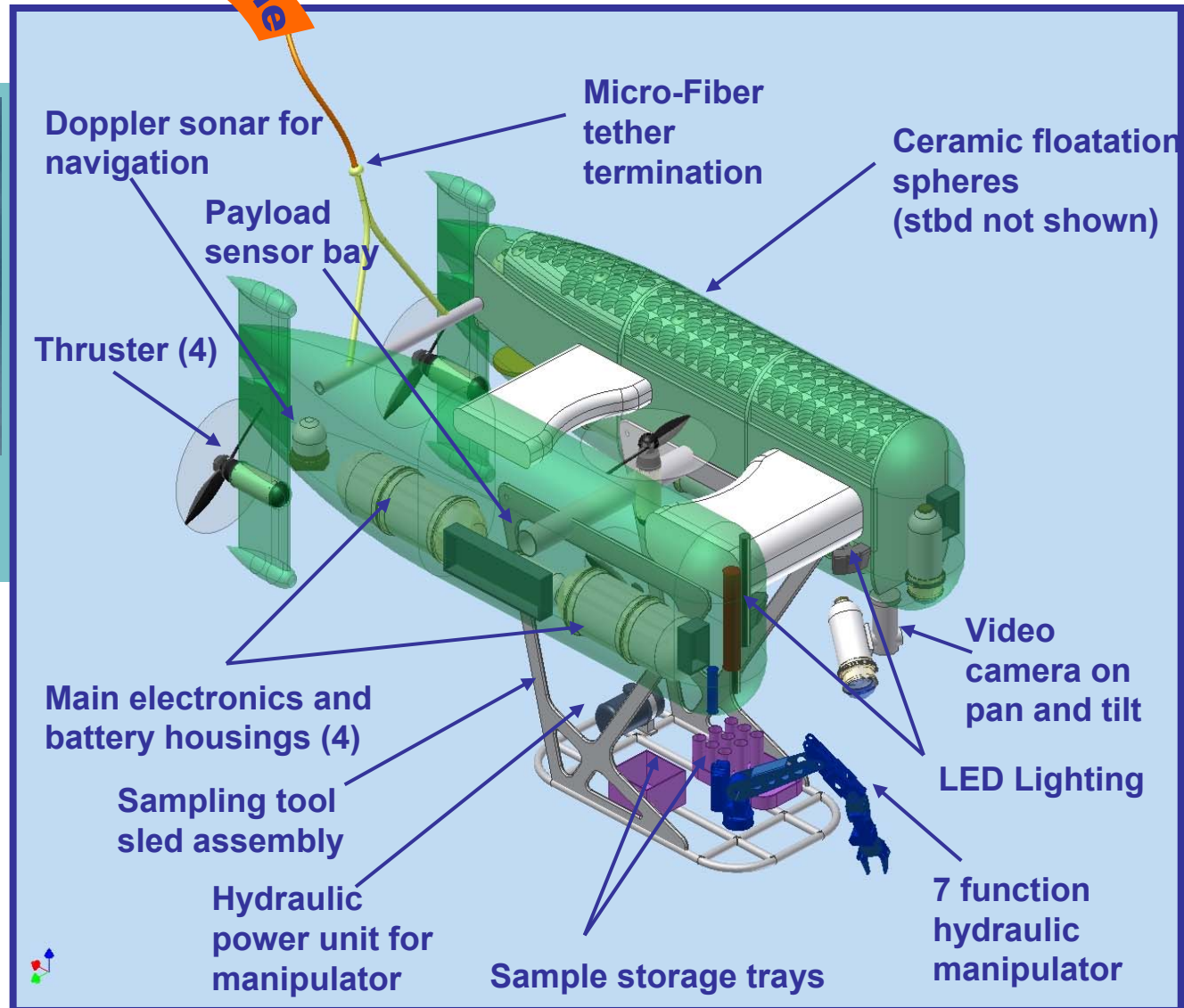
HROV in Tethered Mode

Micro Fiber Optic Cable



5 inches =

12 miles of fiber



Ship Inspections

New contract signed on March 27, 2006 with JMS Naval Architects and Salvage Engineers

Important **reminders** for inspections:

- **READ** THE GUIDELINES
- Identify a “local” scientist to attend the inspection
- Fill out the SCF completely, if you don’t understand what information is being requested -- **ASK**
- Get required information to the inspectors/NSF prior to the inspection, as detailed in the Guidelines
- Open & ventilate tanks in time for the inspection!



The SCF is available on-line:

<http://oceanic.cms.udel.edu/projects/scf>

Group Purchases: What's coming up???

**Discuss what you need NOW,
to get in on the ONE time purchase!**

Cooperate



Collude

Collaborate