

US Navy Oceanographic Research Facilities

RVTEC Meeting - November 2015





THE ONR RESEARCH FLEET

Delivery Sept 2015



R/V Neil Armstrong (AGOR-27)
Woods Hole Oceanographic Institution
Christening 29 Mar 2014
Delivery Jan 2015

Delivery Apr 2016



R/V Sally Ride (AGOR-28)
Scripps Institution of Oceanography
Christening 9 Aug 2014
Delivery 2015

Retired 2014- Transferring
to Philippines



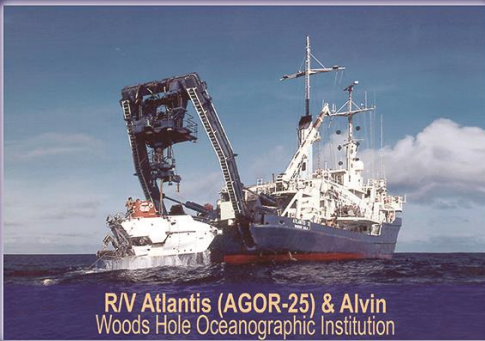
R/V Melville (AGOR-14)
Scripps Institution of Oceanography
To be relieved by R/V Sally Ride

Retired 2014 – Transferring
to Mexico



R/V Knorr (AGOR-15)
Woods Hole Oceanographic Institution
To be relieved by R/V Neil Armstrong

- Navy research ships have global reach - regular two year expeditions
- Science teams rotate to ship for 18-25 day projects
- Navy owned ships have been scheduled via UNOLS since 1972
- Navy ships in UNOLS average 280 days/yr operations
- Daily operations costs are recovered via a "day rate" charged to agency research
- NSF is the major user, then Navy, NOAA, USGS, DOE
- Crews are university employees and professional mariners



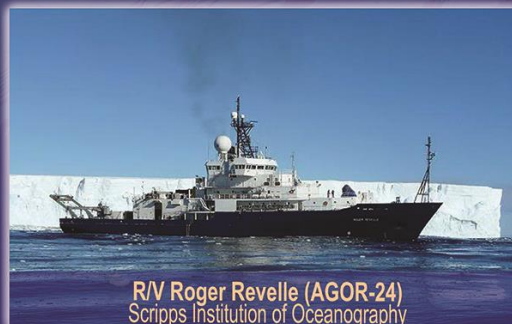
R/V Atlantis (AGOR-25) & Alvin
Woods Hole Oceanographic Institution



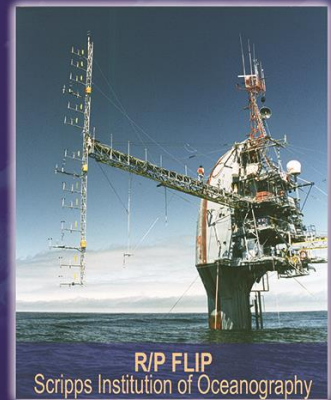
R/V Kilo Moana (AGOR-26)
University of Hawaii



R/V Thomas G Thompson (AGOR-23)
University of Washington



R/V Roger Revelle (AGOR-24)
Scripps Institution of Oceanography



R/P FLIP
Scripps Institution of Oceanography

ONR Research Fleet

- 6 oceanographic research vessels
 - Average, annual usage = 1500 days
 - NSF largest user, ONR, NOAA, NASA,
- 1 **F**loating **I**nstrument **P**latform – FLIP (1962)
 - Scripps-built and operated
 - Acoustics and air-sea interaction experimentation
- 1 Deep Submergence Vessel – ALVIN (1964)
 - Woods Hole-built and operated
 - NAVSEA-certified to 4500m
 - NSF funds major use; funded major overhaul and upgrade in 2013; potential future capability to 6500m

What Keeps Me Busy.....

- Funding ship operations proposals
- Dealing with ship repairs
- Ship inspections: Every 30 months
 - Navy INSURV
 - NSF: Ted!
- Ship improvements
 - DURIP
 - OI
 - Mid-Life Overhaul

AGOR 23 Class Mid-Life Refit (MLR) and Service Life Extension Program (SLEP)

- Planned projects for MLR/SLEP:
 - Propulsion and Electrical Replacement -
 - Bow Thruster Overhaul -
 - Alarms, monitoring, positioning upgrades -
 - Seawater, ballasting improvements -
 - Firefighting systems upgrade -
 - HVAC/potable water/refrig upgrades -
 - Ship hardware and systems overhaul -
 - Scientific support systems –
- THOMPSON funded: Overhaul 2016



THOMPSON Mission Capability Improvements

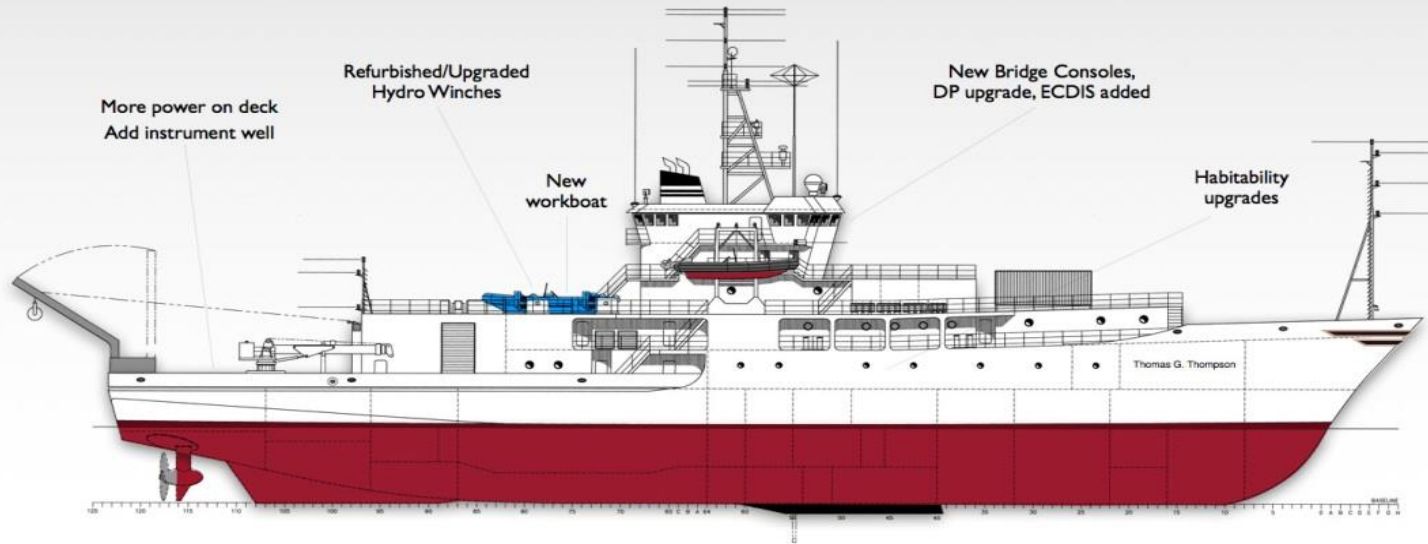
- DESH-5 winch overhaul
- EM302 component replacement
- New CTD Package
- New Ocean Surface Radiometer
- New USBL Transceiver/ Instrument Well
- Computer Network Upgrades
 - Racks, Hardware, Mounts
 - Cat 6a cabling
 - Virtual Machine Server
 - WiFi Distribution System



Office of Naval Research

W

Thompson Mid-life Refit Service Life Extension



RE-POWERING

- ✓ new engines
- ✓ alternators
- ✓ switchgear
- ✓ drives
- ✓ alarm/monitoring
- ✓ controls

ENGINEERING SYSTEMS UPGRADES

- ✓ A/C Plant replacement
- ✓ Firefighting systems upgrades
- ✓ RO Watermaker replacement
- ✓ Sewage system upgrades

SCIENCE SENSOR UPGRADES

- ✓ EM-302 upgrade
- ✓ Add 300 Hz ADCP

LAB SPACE IMPROVEMENTS

- ✓ Lab Lighting/Decks/Ventilation
- ✓ Remove Hydro-sweep

Ocean Class AGOR *R/V's Neil Armstrong & Sally Ride*

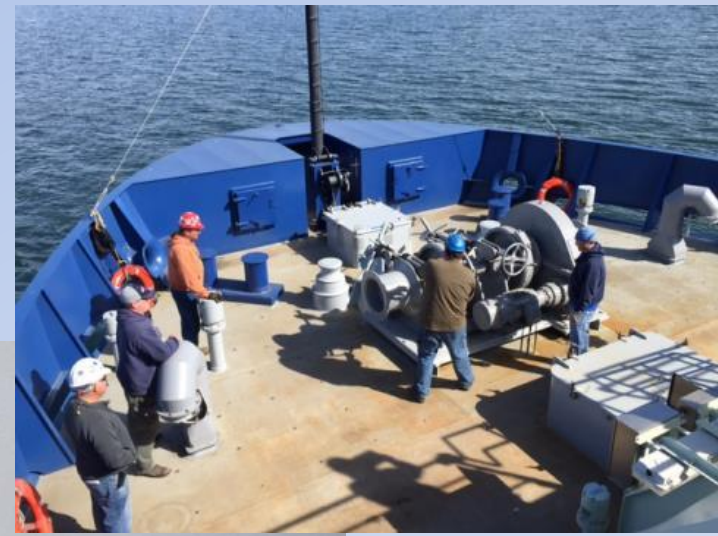


Ocean Class Status on Test, Trials and Delivery

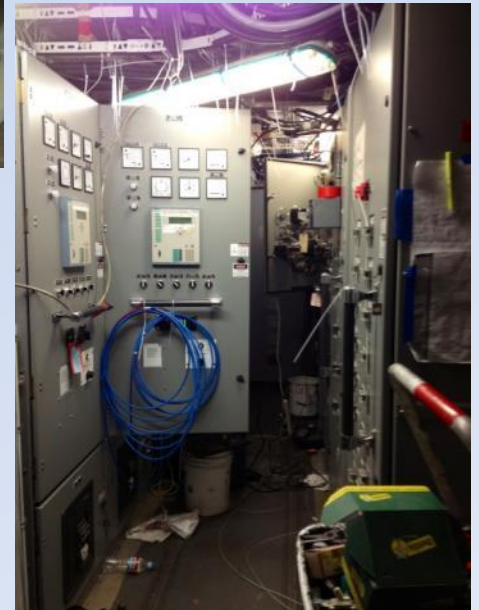
Neil Armstrong - (Sally Ride)

- *Builder's Sea Trials: May (Jan)*
- *Acceptance Trials, Navy INSURV: August (Mar)*
- *Delivery: Sept 23rd (Apr 27th)*
- *Fitting Out, USCG Inspection-COI: Sept-Oct (Apr-Jun)*
- *Shakedown, Transit, Shipyard: Nov-Feb (Jul?)*
 - *Installation-Testing of Acoustic Mission Equipment*
- *Shakedown - Science Verification: Feb-Apr (Jul-Sep)*
- *INSURV and UNOLS inspection – Apr (Sep-Oct?)*
- *Science Verification & Science Ops: May-Dec (Sep-Dec)*

Armstrong Testing – Delivery & Sail-away



Sally Ride Construction Progress



The Best View of the Shipyard

