



THE ONR RESEARCH FLEET

Delivered Sept 2015



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

Delivered Jul 2016



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

Retired 2014- Transferred to Philippines May 2016



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

Retired 2014 – Transferred to Mexico May 2016



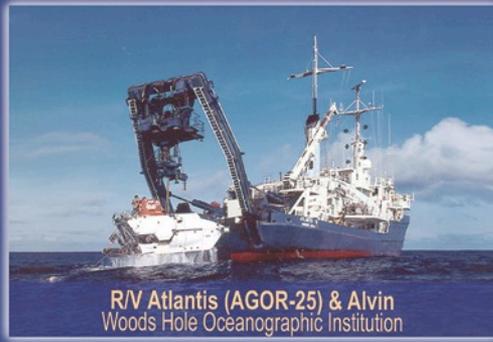
R/V Knorr (AGOR-15)
Woods Hole Oceanographic Institution
To be relieved by R/V Neil Armstrong

- 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

Propulsion Control System Upgrade 2016



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



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

Mid-Life Refit 2017-2018

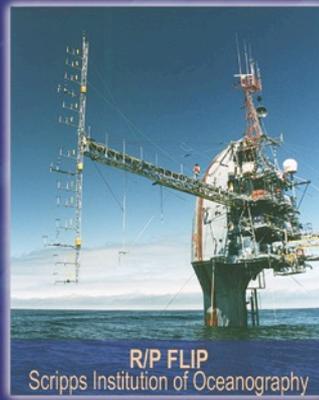


R/V Thomas G Thompson (AGOR-23)
University of Washington

Mid-Life Refit 2018-2019



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



R/P FLIP
Scripps Institution of Oceanography



New Ocean Class Research Vessels

AGOR 27 Neil Armstrong (Woods Hole) – AGOR 28 Sally Ride (Scripps)

Transition to Full Operations

- After Delivery both ships conducted shakedown cruises, deep water winch testing, sea acceptance testing (SAT) of acoustic systems and Science Verification cruises.
- Science Verification cruises (SVC) are “dress rehearsals” with experienced sea-going scientists conducting normal science operations and providing feedback on performance and areas for improvement.
- *Neil Armstrong* started normal science operations in May 2016 including an expedition to the North Atlantic and Iceland.
- Some SVC cruises are still planned to verify operations with the *Jason* ROV system and for Jumbo Piston Coring.
- *Sally Ride* just successfully completed JMS Inspection and designation as a UNOLS vessel. Science Ops begin later this week.

Neil Armstrong
Winch Testing



Sally Ride
Testing Main Crane





AGOR-23 Class Mid-life Refit - Overhaul

- AGOR-23 Class R/Vs (*Thompson*, *Revelle*, *Atlantis*) are beyond the mid-point of their 30 year service lives
- Mid-life overhauls will address regulatory requirements, obsolescence, upgrade/replace problematic systems, and to extend the service lives of the vessels beyond 30 years
- Design work completed Jul 14 for *Thompson*; shipyard selected Aug 15; *Thompson* overhaul June 2016- July 2017 in Seattle at the Vigor shipyard
- Planning for 2018 overhaul of AGOR 24/*Roger Revelle* has begun.
- Funds permitting, we are anticipating a late 2019 overhaul project for *Atlantis*.
- Overhauls should extend the service life of these ships by 10-15 years.

Thompson in Shipyard for Mid-Life



Revelle



Atlantis

Kilo Moana Upgrades

- Replace outdated and un-supportable Propulsion Control and Generator Control Systems
 - New Switchboard Components
 - New Bow Thruster Drive
 - Update to Propulsion Drives
 - New Filters
 - New Automation and Alarm System
 - Upgrade to DP system
 - New ECDIS System





Technical Enhancement Projects on ONR Vessels

- New Vessels (Armstrong & Ride)
 - Deep and Shallow Water Multi-beams
 - Multiple ADCP frequencies
 - EK80: hearing lots of interest in this capability
 - HiPaP and multiple, additional transducer wells
 - Multiple Ship/Shore Comm paths
 - Ride: Multiple Hi Seas Net antennae, FBB
 - Armstrong: Hi Seas Net, FBB, Fleet Express
- Older Vessels (as part of Mid-Life refit)
 - Thompson: EM302, Labs, OTS gear, Instrument well
 - Revelle: planning new EM712, HDSS upgrade, and TBD
 - Atlantis: TBD
 - Kilo Moana: improvements to CTD handling system?

Neil Armstrong – North Atlantic



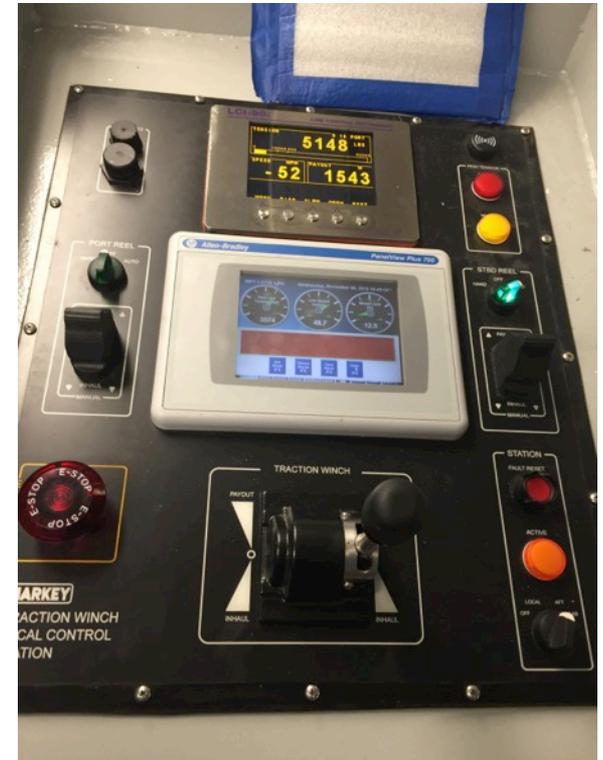
Sally Ride off San Diego



Issues to Discuss/Consider

All aspects of our new ships are computer, PLC, PLU driven

- Upgrades of older ships are resulting in similar configurations and challenges/demands!
- Are we (Feds, institutions and UNOLS) adequately supporting both ship and science technical requirements?



Questions?

