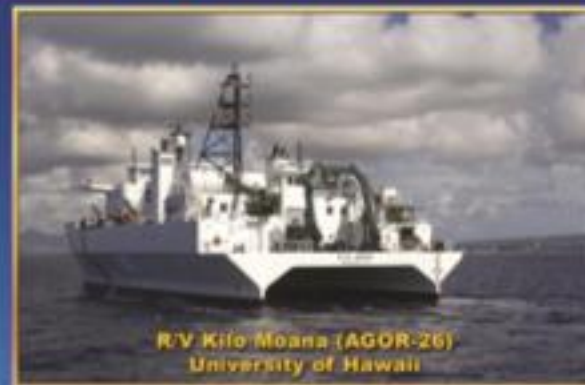




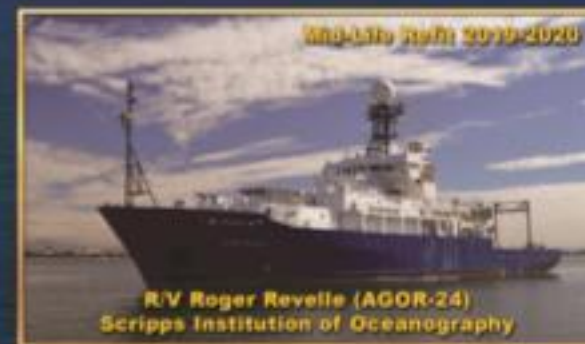
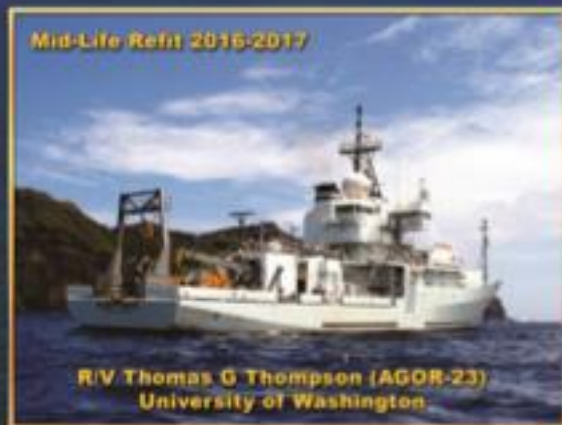
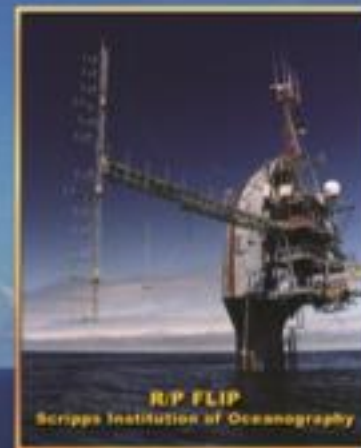
US Navy Research Facilities Renewal - Building a Lasting Fleet

Brief to IRSO
8 October 2019

NAVY VESSELS OF THE U.S. ACADEMIC RESEARCH FLEET

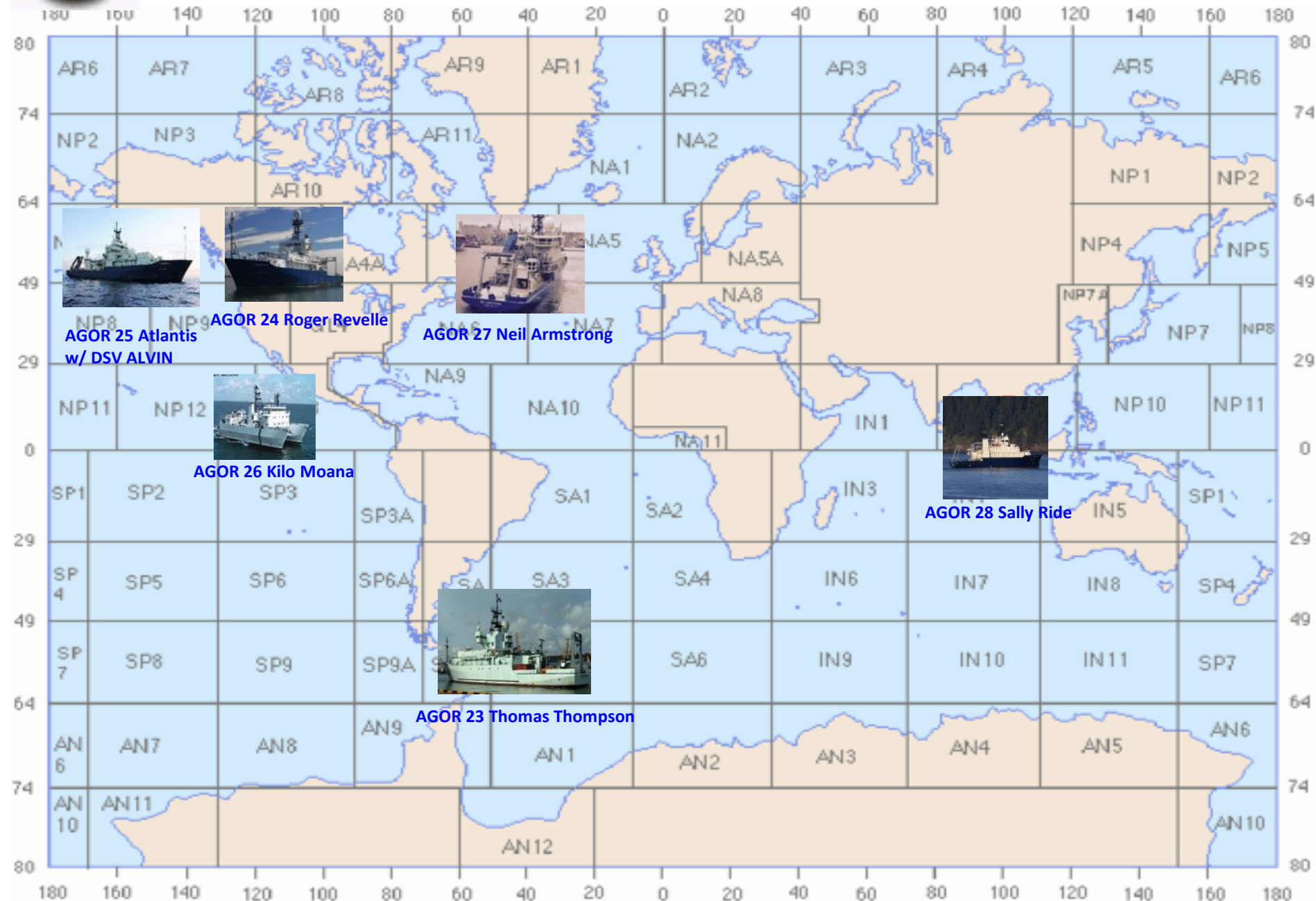


- **Global reach - 2-year missions**
- **Ships operate 280-300 days/year**
- **Science teams rotate to ship for 18-25 day projects**
- **Daily operations costs paid by research agency (e.g., National Science Foundation, Navy, NOAA, USGS, DOE)**
- **Crewed by professional mariners and university employees**





ONR Oceanographic Research Fleet September 2019



U.S. Navy OCEANOGRAPHIC RESEARCH VESSELS INTERNATIONAL TRANSFER

BRP GREGORIO VELASQUEZ: ex-MELVILLE AGOR 14

Scripps Institution of Oceanography

Delivered -1969 **Mid-Life Upgrade 1993**

Transferred to Philippines April 2016



ADM Tecolutla : ex-KNORR AGOR 15

Woods Hole Oceanographic Institution

Delivered – 1970 **Mid-Life Upgrade - 1993**

Transferred to Mexico March 2016



U.S. Navy Global Class AGOR Mid-Life Refits

Extending the service life another 15 -20 years



AGOR 23 – *Thomas G Thompson*
University of Washington (UW)
Shipyard 6/16 – 12/18 Completed
Service Life Extended to 2036



AGOR 24 – *Roger Revelle* - Current Retirement - 2026
UCSD - Scripps Institution of Oceanography (SIO)
Shipyard 4/19 – 4/20
40% complete with refit



AGOR 25 – *Atlantis* - Current Retirement - 2027
Woods Hole Oceanographic Institution (WHOI)
Shipyard 6/20 – 6/21 planned
Evaluating Shipyard Proposals
Shipyard Award planned for October 2019

Fleet Improvements & Assessments

- *Thompson, Revelle, Atlantis* in mid-life; *Armstrong and Ride* with new construction
 - New Tier 3 Diesel Generators on 5 of 6 AGOR
 - Diesel Electric Propulsion with Integrated Bus and reduced number of online generators resulting in significant reduction in fuel use.
 - New OWS, MSD, and BWTS including funding for BWTS on *Kilo Moana*
- Improved hands free CTD handling systems on *Revelle, Kilo Moana, Armstrong & Ride*
- Upgraded Acoustic Systems:
 - Gondola with EM124, EM712, HDSS (Pinkel Sonar), EK80 on *Revelle*
 - EM124, USBL, EK80 on *Atlantis*
 - New transducer well and plan for new EM124 on *Thompson*;
 - New SBP 29 & EM124 upgrade (SBP uses EM124 receive array) on *Sally Ride*
- ABS assessment of remaining hull service life on *Kilo Moana*
- Assessment of continued operation of *FLIP*

Questions?

