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

R/V Neil Armstrong (AGOR-27) Woods Hole Oceanographic Institution
R/V Sally Ride (AGOR-28) Scripps Institution of Oceanography
R/V Kilo Moana (AGOR-26) University of Hawaii
R/V Atlantis (AGOR-25) & Alvin Woods Hole Oceanographic Institution
R/P FLIP Scripps Institution of Oceanography
R/V Thomas G Thompson (AGOR-23) University of Washington
R/V Roger Revelle (AGOR-24) Scripps Institution of Oceanography

Distribution A. Approved for public release, distribution is unlimited.
ONR Update

RVOC Flashback Slides

23 April 2013

21 April 2022
ONR Fleet Activities-Ship Retirements

• Planned retirements:
  – KNORR: Due offline Spring 2014; (six months before delivery of AGOR 27 in Fall 2014)
  – MELVILLE: Due offline six months before delivery of AGOR 28 (~ Spring 2015)

• Future disposition:
  – Foreign Military Sale or Transfer
  – Navy International Programs Office
### ONR Science Objectives Requiring Shiptime

<table>
<thead>
<tr>
<th></th>
<th>2013 Planned</th>
<th>2022 Planned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melville-Ride</td>
<td>83</td>
<td>119</td>
</tr>
<tr>
<td>Endeavor –</td>
<td>53</td>
<td>58</td>
</tr>
<tr>
<td>Walton Smith-KM</td>
<td>46</td>
<td>0/32</td>
</tr>
<tr>
<td>Hugh Sharp-</td>
<td>97</td>
<td>26</td>
</tr>
<tr>
<td>Knorr- NA</td>
<td>20</td>
<td>49</td>
</tr>
<tr>
<td>New Horizon- AE</td>
<td>33</td>
<td>58</td>
</tr>
<tr>
<td>Oceanus-</td>
<td>52</td>
<td>0</td>
</tr>
<tr>
<td>Pelican-</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Point Sur-SKQ</td>
<td>29</td>
<td>52</td>
</tr>
<tr>
<td>Atlantis-</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Revelle-</td>
<td>108</td>
<td>50</td>
</tr>
<tr>
<td>Thompson-</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Sproul/Carson</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL -</strong></td>
<td>560</td>
<td>495</td>
</tr>
</tbody>
</table>

(with Foreign Days 550)
Major ONR Sponsored Projects At Sea in 2013

• Columbia Bar – late May
  – Multi-ship effort (Melville, Oceanus, Pt Sur)
• South China Sea (Revelle)
  – Cooperative with Taiwan and Philippines;
  – Currently Clearance issues, but cruises will occur
  – Science cruises 2013-2014
• Bay of Bengal (Revelle)
  – Cooperative with Sri Lanka
  – Multi-year effort
• Arctic Research – ship-based beginning in 2015
• UAV capability demonstration on AGORs
Major ONR Sponsored Projects At Sea *(relatively Unchanged)*

- New England Sea Mounts
- Multi-ship effort (Endeavor, Armstrong, Sharp, AE)
- South China Sea
- Bay of Bengal and Arabian Sea
  - Cooperative with Sri Lanka
  - Multi-year effort
- Arctic Research – ship-based beginning Continues
- UAV capability demonstration on AGORs (No current efforts)
ONR Changes since 2013

- **INSURV** - 60 months in 2013 to 36 months 2022
- **NSF/JMS** - Possible Increase Concurrent with INSURV

Manpower Support:
Review COI requirements
Enhancing use of Strategic Sealift Officers
(in 2013 they were called Merchant Marine – Naval Reservists)
  - ONR direct Reserve Support to Shore,
  - Temp assignments at sea,
  - ONR contractor support – former CO – T-AGS
AGOR 23 “Mid-Life” Refit & Possible SLEP

- Scoping study completed by Glosten in Dec
  - Options include “must-do” and “nice to have” paths
    - New/replacement systems for environmental compliance
    - New/replacement systems to overcome obsolescence
    - New/replacement systems for improved ship performance
- FY15 budget request presented to CNR in Dec
  - Recommended “high option” for SLEP to 45 yrs
  - Awaiting final word, but not optimistic
- DoD FY13 Budget included $15M for AGOR
- Planning for other means to accomplish “must-do” items
- ACTUAL $165M total about $20 over budget
Ship Capability Improvements Planned in FY13/14

- **Atlantis** –
  - Replacement chem van & trawl winch hydraulic pumps

- **Kilo Moana** –
  - Design study for a new boat davit; Caley Crane repair
  - Power generation and control improvements

- **All Z-Drive Vessels** -
  - Thruster Improvement Study
  - Z-Drive Monitoring System for AGOR 23

- **All Global Class Vessels** -
  - DESH-5 Winch Upgrades
  - Electronic Charting and Display Systems
Transitioning Data into Knowledge: Means, Ways, and End Model

**Geostrategic Setting:**
Scientific Diplomacy
STEM Education
AI, “Big Data”, MetaData
Multi-disciplinary Collaboration
International Data Database Management

**Means:** Research
Vessels other sensors, tools and platforms

**Ways:**
UNOLS, NOPP, community of Interest

**Ends:** Oceanographic Data

Support functions “6.0” Research

Is there a Gap? Does this Require specialized skillset

**Means:** Analytical Data

**Ways:**
Basic/APPLIED Research Techniques

**Ends:** Basic/APPLIED Research Knowledge

Basic and Applied Research Programs

49 Vessels
8,383 Cruises
40,233 Data Sets
Ship Capability Improvements Planned in 2022/23

• Atlantis –
  – New Rescue Boat
• Kilo Moana –
  – Crane De-rated - still needs replacement
  – Power generation and control improvements
• All Z-Drive Vessels- (NO CHANGE)
  – Thruster Improvement Study
  – Z-Drive Monitoring System for AGOR 23
• All Global Class Vessels-
  – MultiBeam Upgrades
  – Pinkel sonar (HDSS) Revelle
  – Thompson new EM124 – funded in 2022
  – Thompson Clean Power improvements