

United States Navy Oceanographic Research Facilities



AGOR 15 Knorr 279'
1970



WHOI

AGOR 14 Melville 279'
1969



Scripps

AGOR 23 Thompson 274'
1991



Univ Wash

AGOR 25 Atlantis 274'
1997



WHOI

AGOR 26 Kilo Moana 172'
2002



Univ Hawaii

R/P FLIP 355'
1962



Scripps-MPL

DSV 2 Alvin 4500m
1964



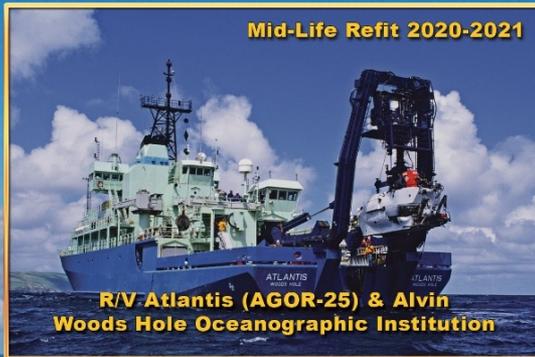
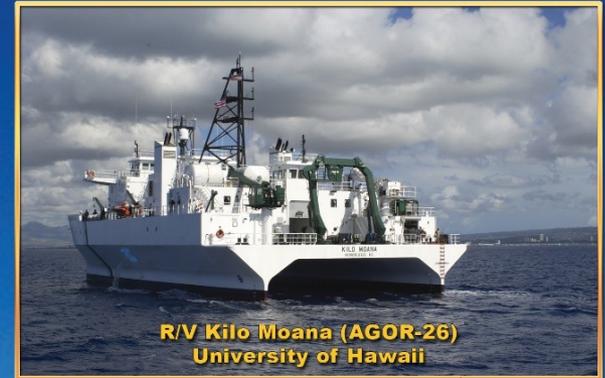
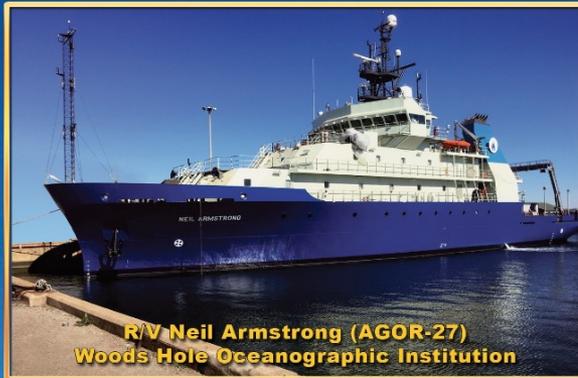
WHOI

AGOR 24 Revelle 274'
1996

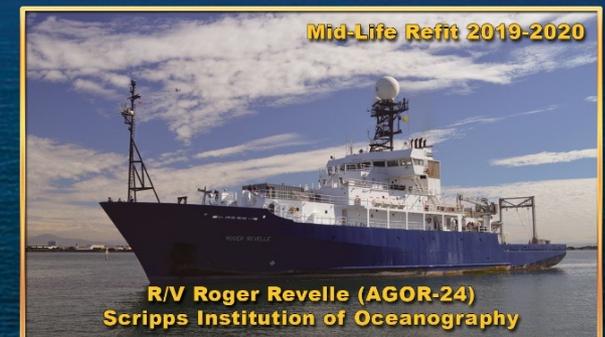
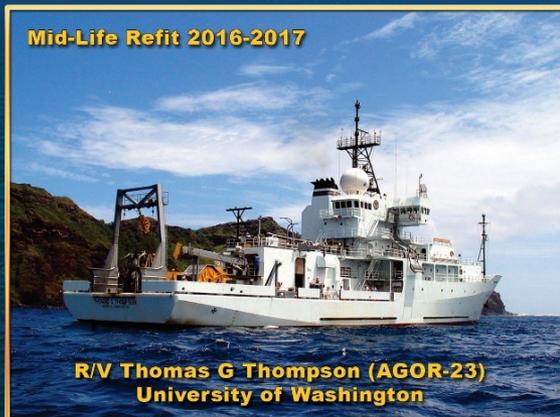
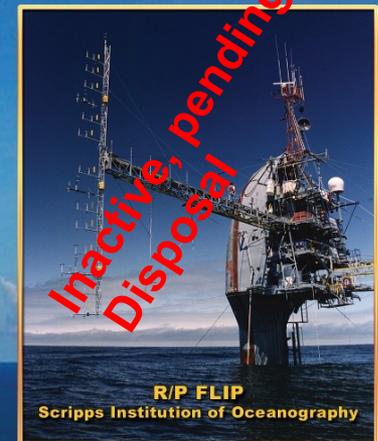


Scripps

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 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

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

Means: Research Vessels other sensors, tools and platforms

Ways: UNOLS, NOPP, community of Interest

Ends: Oceanographic Data

Support functions
"6.0" Research

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

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



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