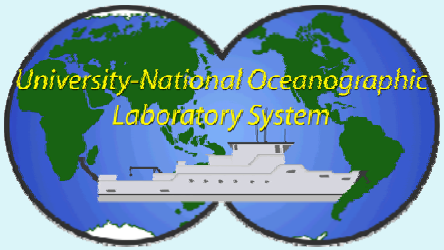

UNOLS Vessel Ship Classes

FIC Fleet Improvement Plan

UNOLS Ship Classes:

GLOBAL CLASS	OCEAN CLASS	
[Full Operating Year (FOY) = 300 days]	[FOY = 275 days]	
• *Atlantis* • *Knorr* • *Marcus Langseth* • *Melville* • *Revelle* • *Thompson*	• *Sikuliaq* • *Kilo Moana*	

FIC Fleet Improvement Plan

UNOLS Ship Classes:

INTERMEDIATE CLASS [FOY = 250 days]	REGIONAL CLASS [FOY = 200 days]
• *Endeavor*	• *Cape Hatteras*
• *New Horizon*	• *Point Sur*
• *Oceanus*	• *Atlantic Explorer*
• *Wecoma*	

FIC Fleet Improvement Plan
UNOLS Ship Classes:

REGIONAL COASTAL CLASS	LOCAL CLASS	
[FOY = 180 days]	[FOY 110 days]	
• *Pelican*	• *Blue Heron*	
• *Hugh R. Sharp*	• *Clifford A. Barnes*	
• *Sproul*	• *Savannah*	
• *Walton Smith*		

University-National Oceanographic Laboratory System

NSF Class Suggestions

The UNOLS Fleet

	Built	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GLOBAL																		
Melville (ONR)	1969																	
Knorr (ONR)	1970																	
Thompson (ONR)	1991																	
Revelle (ONR)	1996																	
Atlantis (ONR)	1997																	
Langseth (NSF)	1991/08																	
Sikuliaq (NSF)	2014						Funded - Under Construction											
Total		6	6	6	6	6	7	6	5	5	5	5	5	5	4	4	4	4
OCEAN																		
Kilo Moana (ONR)	2002																	
AGOR 27 (ONR)	2014						Funded - Under Design											
AGOR 28 (ONR)	2015							Funded - Under Design										
Wecoma (NSF)[1][2]	1976			?	?	?	?											
Endeavor (NSF)[1][2]	1976			?	?	?	?											
Oceanus (NSF)[1][2]	1976			?	?	?	?											
Atlantic Explorer (BIOS)[1][2]	1982/06																	
New Horizon (SIO)[1][2]	1978																	
Total		6	6	6	6	6	7	5	5	4	4	4	4	4	4	3	3	3
REGIONAL																		
Point Sur (NSF)[2]	1981				?	?	?	?	?									
Cape Hatteras (NSF)[2]	1981				?	?	?	?	?									
RCRV #1 (NSF)	2016																	
RCRV #2 (NSF)	2017																	
RCRV #3 (NSF)	2018																	
Sproul (SIO)	1981																	
Pelican (LUMCON)	1985																	
Hugh R. Sharp (UD)	2005																	
Total		5	5	5	5	5	4	4	4	3	4	4	4	4	4	4	4	4
LOCAL																		
Walton Smith (Miami)	2000																	
Savannah (Skidaway)	2001																	
Blue Heron (U Minn,)	1985																	
Barnes (NSF)	1966																	
Total		4	4	4	4	4	3	3	2	2	2	2	2	2	2	2	2	2
Total Ships		21	21	21	21	21	21	18	16	14	15	15	15	15	14	13	13	13

Notes:

(1) Formally the "Intermediate" class ship under the old

(2) Service Life Extensions under consideration based on ship condition and science utilization

Navy Owned =

NSF Owned =

Institutionally Owned=

Planned Vessel =

Wecoma A-Frame Upgrades

RVSS Appendix A & B along with other events have prompted OSU to take a new look at replacing the A-frame on WECOMA:

- They have a design, completed in late ‘08, by Jensen Maritime for a larger, stronger A-frame that will meet the CFR requirements for use with 9/16 and 0.680 wires and provide a greater height and width than the present A-frame. Jensen provided drawings for modifying the structure of the vessel to support the new frame.
- SSSE ‘09 funding, $362K, will be adequate to fabricate and install the A-frame.
- Funding is probably not adequate for a new Hydraulic Power Unit so the movement of the A-frame will be slow and probably just on/off rather than proportional.

Wecoma A-Frame Upgrades

- Actively working with Dynacon and Allied Systems for cost estimates for modified versions of their existing “articulated” A-frames (Dynacon 973, Allied A-120) which would have a greater travel fore and aft and could be lowered within 6 feet of the deck in the inboard position to allow changing sheaves and other hardware at sea without having to climb the frame.
- Frame would be more versatile in supporting multidisciplinary science missions and enhance safety.
- Once cost estimates are received OSU will develop and funding plan and include an appropriate request in our SSSE ‘11 proposal.

Wecoma A-Frame Upgrades

- A likely example would be to have the A-frame fabricated with the available funds and ask for installation and HPU funding in our ‘11 proposal.
- If the more versatile A-frame proves infeasible OSU will proceed with the original Jensen design and request HPU funding in ‘11.
- In either case OSU plans to have the A-frame fabricated in ‘11 with the intent of having the installation done by local contractors alongside our pier here in Newport.

Endeavor A-Frame Upgrade

- A-Frame will allow the Endeavor greater safety and increased science mission capacity as well as bring this over the side handling equipment up to the new RVOC Safety Standards.
- Bay Marine final design sent to Archon Engineering for a Finite Element Analysis.
- Bay Marine has designed the new A-Frame to stay within the current parameters of vessel stability. To minimize additional installation expense, we plan to utilize the same foundation deck plate and existing under deck structural support.

Endeavor A-Frame Upgrade

- Articulated A-Frame design considered but found that due to the additional expense, and lack of support from ship crew and marine techs, this would not be feasible.
- Budget: $40k for design and $150k for fabrication and installation.
- Schedule: Plan to have installed locally dockside in early 2011
- A-Frame and associated components can be cross-decked to another vessel in the future.

Endeavor A-Frame Upgrade

Current Endeavor A-Frame specifications:

Max height inboard transom to center	20'
Height outboard transom to center	5' 6"
Max width between vertical legs	11'
Max wire Assigned Breaking Load	30,000 lbs

Upgraded Endeavor A-Frame:

Max height inboard transom to center	~24'
Height outboard transom to center	~6'9"
Max width between vertical legs	~12’7"
Max wire Assigned Breaking Load	40,000 lbs