

# EXPLORE



## Ocean Exploration and Research: To Boldly Go...

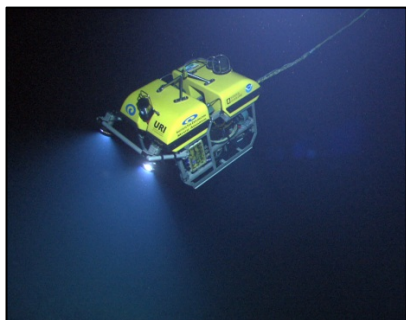


Tim Arcano  
Director

NOAA Office of Ocean Exploration &  
Research



DESSC Annual Community Meeting  
December 2, 2012



# Program Overview



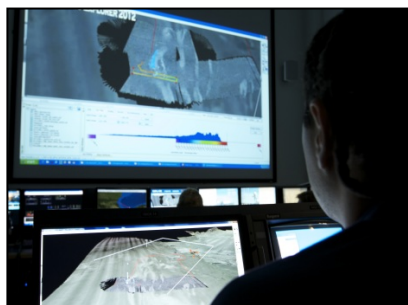
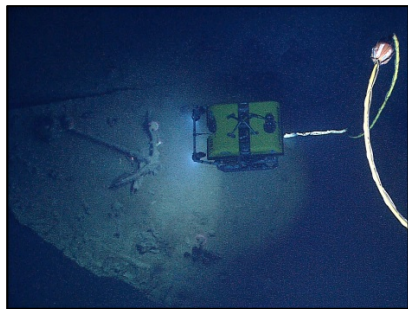
## Four OER Cornerstones:

1. Telepresence-enabled Systematic Exploration
2. Baseline Characterization through Inter-agency partnerships
3. Extended Continental Shelf Mapping
4. Targeted Exploration





# *Okeanos Explorer* Program Updates

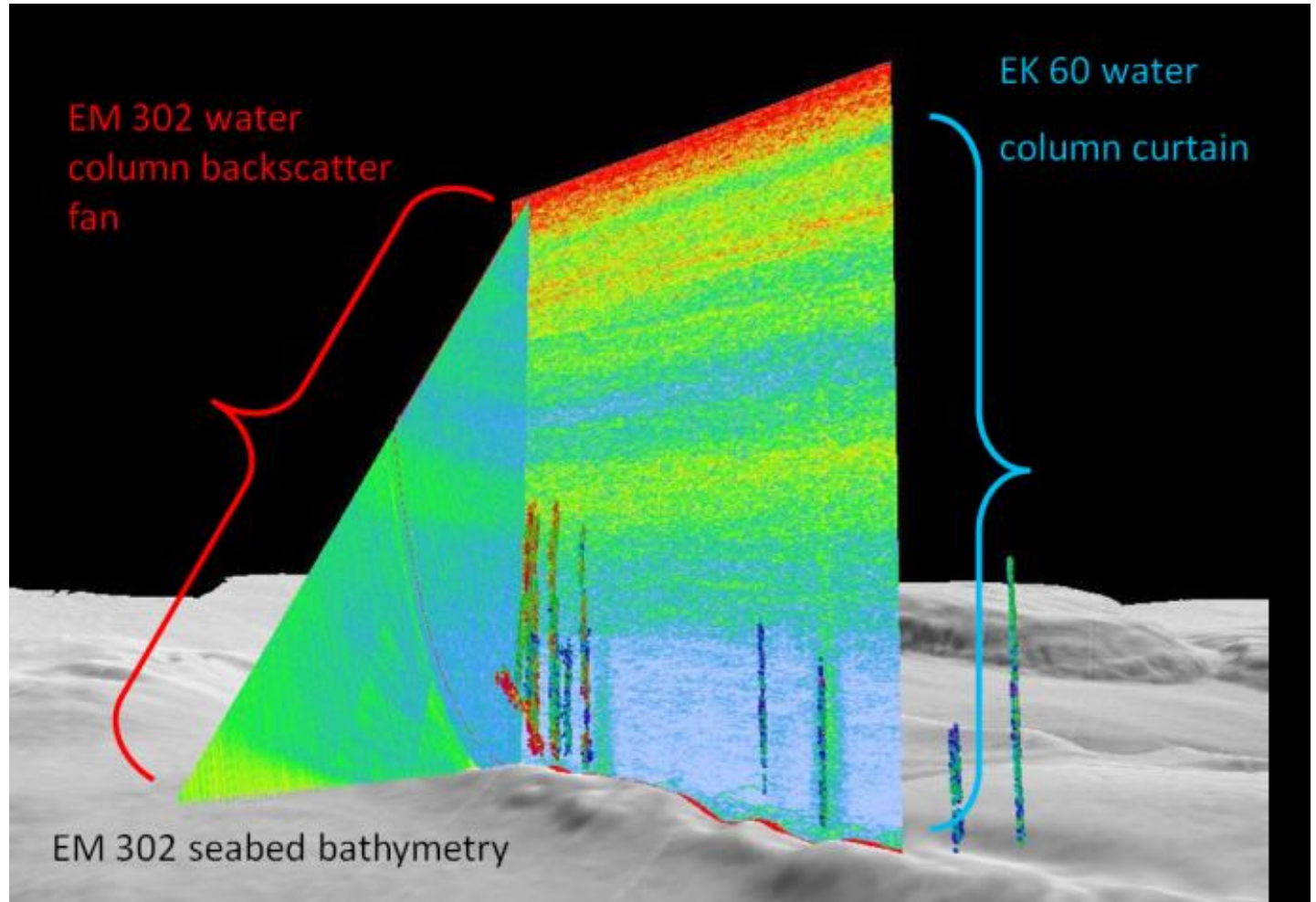
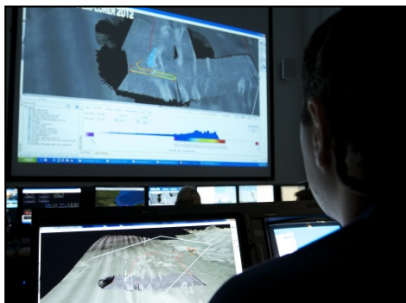
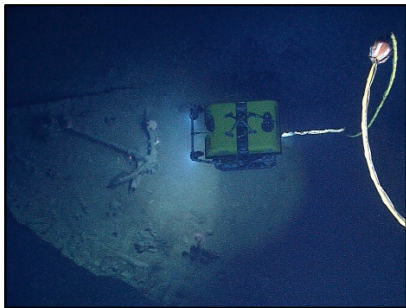


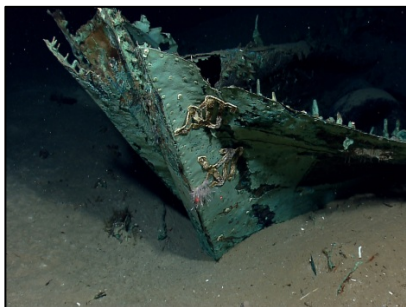
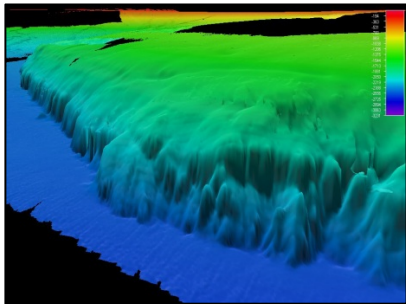
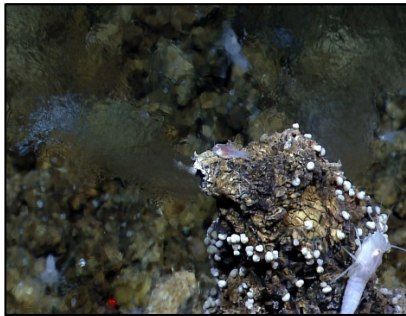
- Moving the Telepresence paradigm forward
  - Telepresence-enabled AUV operations- NSF, WHOI, Duke, NOAA, URI
  - Fly away telepresence system
- Water column mapping
  - UNH





# Okeanos Explorer Program Updates



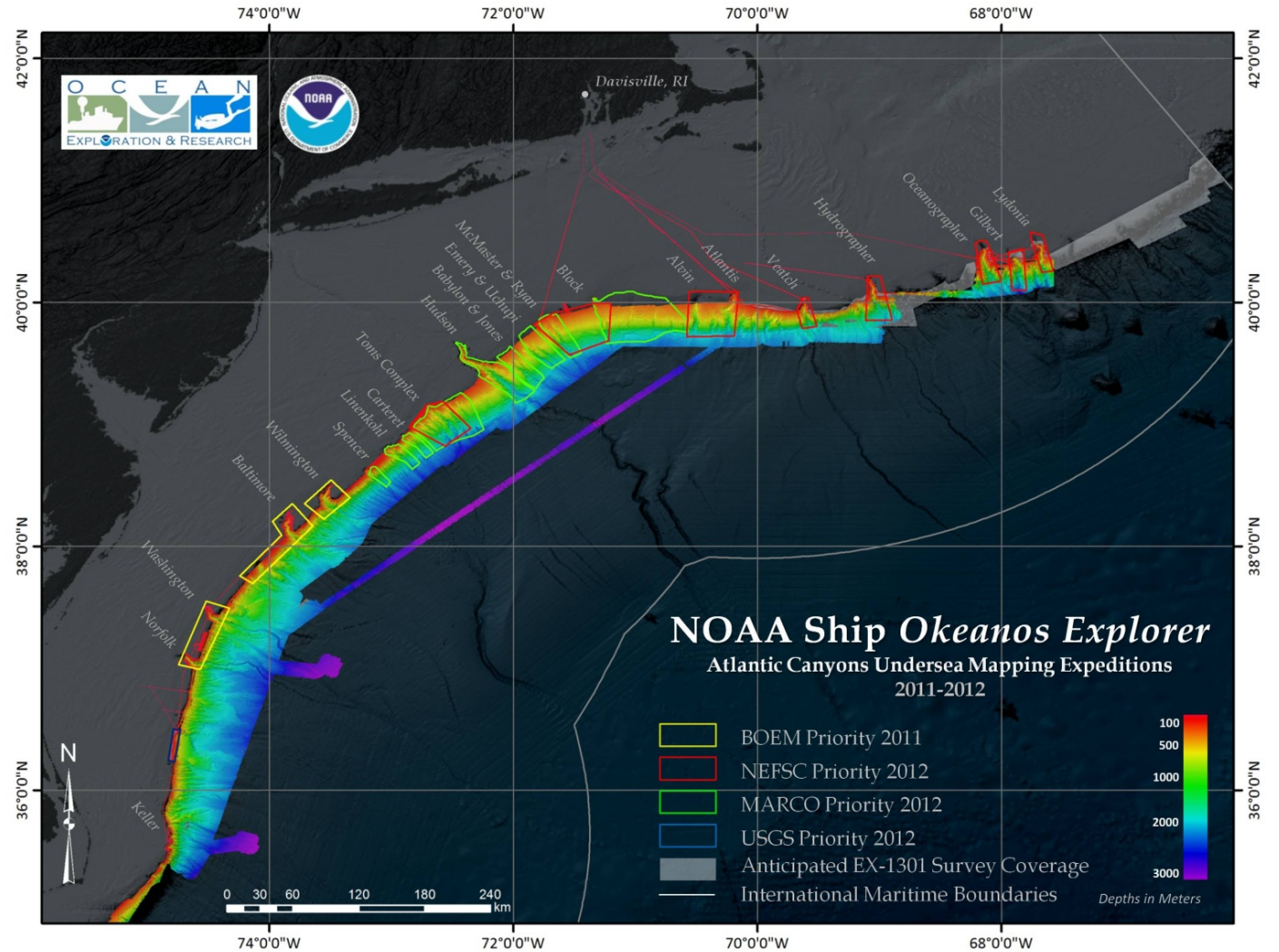
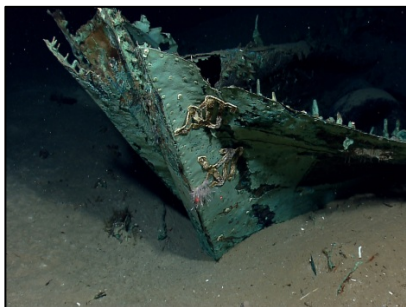
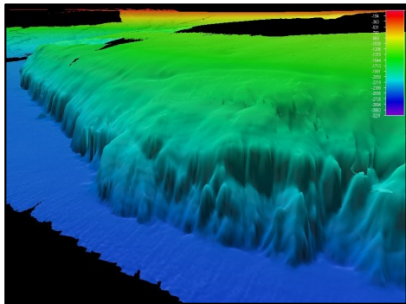
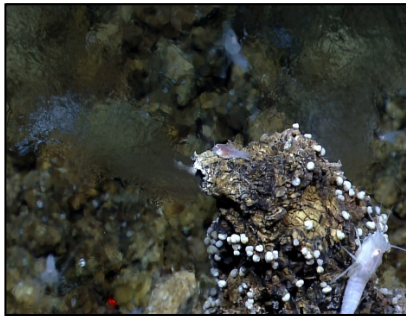


# Okeanos Field Season Highlights

- Atlantic and Gulf of Mexico – BOEM, NMFS, NOS, UNH, Academia
  - *Priority Exploration Targets*
  - *Additional DWH Impacts Data*
  - *Cultural Resources*
- Atlantic Canyons Undersea Mapping Expedition (ACUMEN) – MARCO, NMFS, NOS
  - Expected completion Spring 2013
- Telepresence-enabled AUV operations



# Okeanos Field Season Highlights



# Fly Away Telepresence



ocean explorer

[Back](#)

Submarine Ring of Fire 2012: Northeast Lau Basin Expedition Video

[Live Stream](#) | [NE Lau Response Cruise 2009](#) | [Bathymetry Fly-throughs](#) | [Behind the Science](#)

**Live Stream**  
ROV Camera View

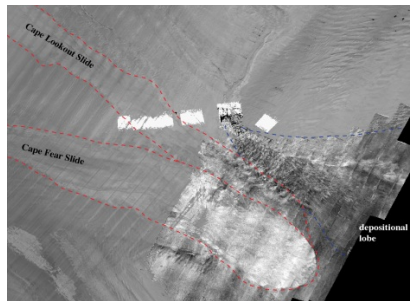
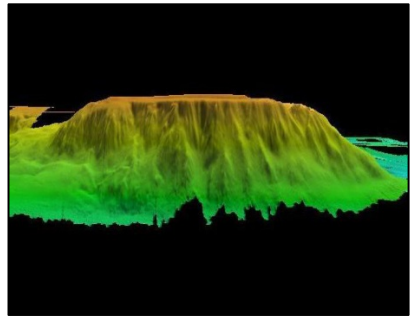
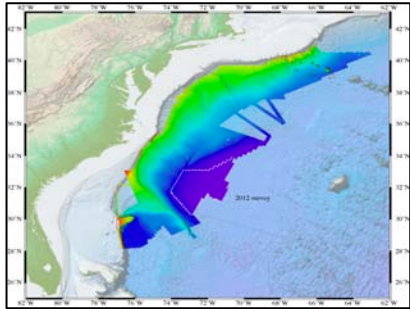
**(SRoF12)** 02:11  
See the bathymetry fly-through animation of the Northeast Lau Basin (SRoF12 expedition).

**(SRoF12)** 00:44  
Flythrough from the north to the south along the Northeast Lau basin.

Select a video from the playlist by clicking on an icon featured along the right side of the player window. To learn more about the science and participate in the expedition, go to the [Ring Of Fire 2012](#) website or click on the other related links at the bottom of this page. Share the video clips by email with your friends or embed them on your blog.



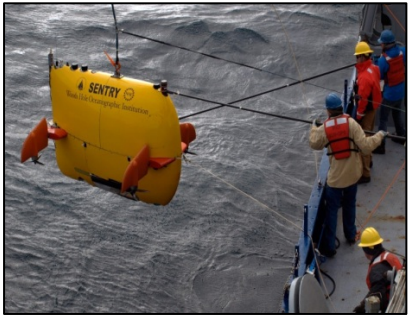
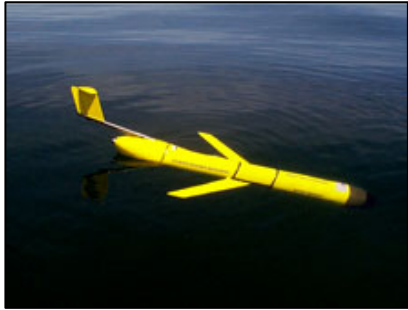
# Mapping the Extended Continental Shelf



- Primary goal: Establish the limits of the areas of seabed beyond 200 miles where the United States could potentially exercise sovereign rights over seabed and sub-seafloor continental shelf natural resources
- Mapping in FY2012
  - 20,000 sq nm of “Foot of the Slope” between Nautilus Basin and the Alpha / Mendeleev Ridge
  - 19,000 sq nm off the coast of the Carolinas
  - 34,000 sq nm collected through a partnership with Canada

Photo credits: UNH/JHC & USGS





# TFORT

- *Task Force on Ocean Exploration and Undersea Research Technology and Infrastructure*
  - Public Law 111-11
- Created under the Interagency Working Group on Ocean Partnerships
- Technology “stressing” mission strategy
- Phase I: Mission Planning Workshop

# Status of National Undersea Research Program (NURP)

- President's FY2013 budget proposed termination of NURP

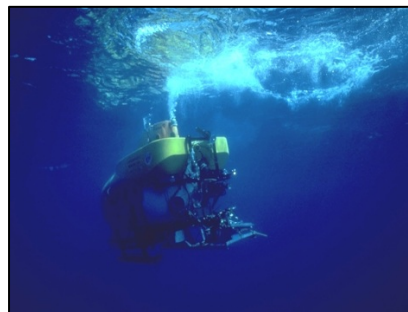
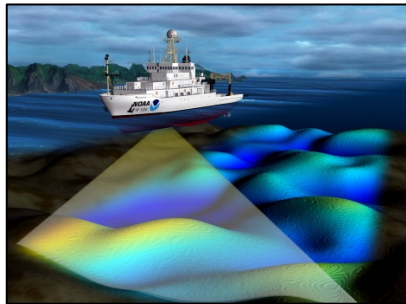
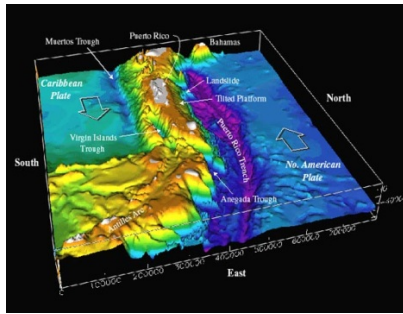


Photo credits: Aquarius Reef Base/ HURL



# Onward and Downward



- 6000m ROV Shakedown, Puerto Rico Trench
- Atlantic Seamounts Exploration
  - *Mapping*
- ECS mapping in the Central Pacific or finishing up in the mid- Atlantic
- TFORT workshop, tentatively June 2013