



# *Alvin 6,500 Meters*



## **In 2015 *Alvin* will be moving to the establishment of a Major Overhaul Stabilization Account, or "MOSA"**

- Follows UNOLS convention for the maintenance of the research vessel fleet
- Enables a stabilized, multi-year plan for maintenance and upgrade of the submersible, which encourages improved planning
- Ensures a more level year-to-year financial basis for planning and distribution of costs for these activities within the submersible day rate

## **Progression to the full design capability of *Alvin***

- Monitor battery technology with potential to be certified for human occupied submersibles
- Ensure ongoing maintenance and enhancement activities of the submersible are consistent with 6,500m operations
- Near-term focus on key design studies to provide critical information necessary to establish a final 6,500m configuration





# Alvin 50th





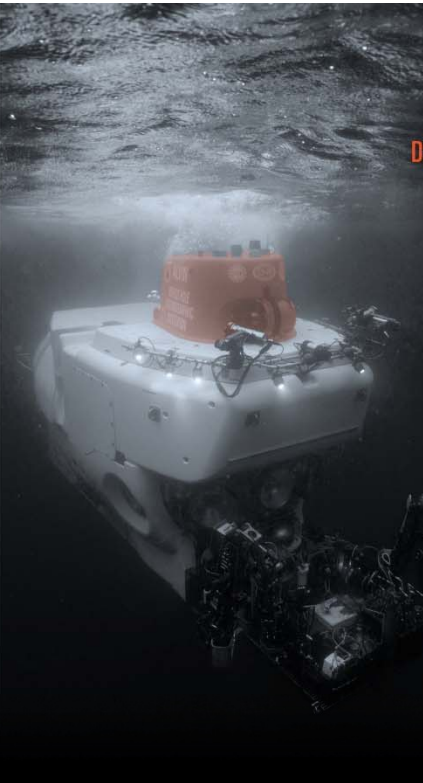
# Alvin 50th Website



www.who.i.edu/alvin



## DSV ALVIN | 50 Years of Discovery



From December 2010 to 2013, ALVIN underwent a comprehensive overhaul and upgrade funded by the National Science Foundation.



181 KILOGRAMS PAYLOAD (400LBS) = 1 mail crate

3.7 METERS TALL (12.1 feet) = 1 compartment

7 METERS LONG (23.1 feet) = 1 compartment



4.8 CUBIC METER SPHERE (171 cubic feet)

3 PEOPLE 1 pilot and 2 science observers

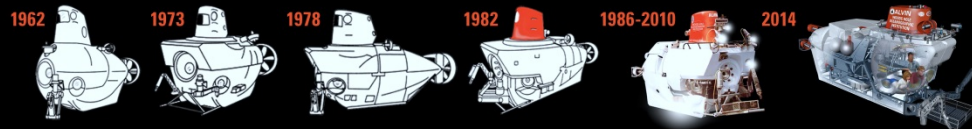
98 percent of the ocean's depth, as well as allowing it to stay at depth longer. Currently Alvin is capable of reaching 66%.

The sub's newly forged titanium sphere has more space, better views and greater depth capability

Current 4,500 METERS DEPTH (14,795 ft / 2.8 miles) = 18 OrcaStar buoys

Future 6,500 METERS DEPTH (21,325 ft / 4 miles) = 148 OrcaStar buoys

The newly upgraded ALVIN is the world's longest-operating deep-sea submersible.



Since ALVIN was launched in 1964, it has made more than 4700 dives, along the way participating in some of the most iconic discoveries in the ocean.



1977 ALVIN explores hydrothermal vents

Researchers diving in ALVIN explored the hydrothermal vent field near the Galapagos Islands and, to their complete surprise, found that the vents were brimming with extraordinary, unexpected life, including large clams and tall, red-tipped tubeworms.



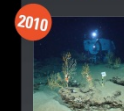
1986 ALVIN visits the sunken Titanic

ALVIN helped explore the wreckage of RMS Titanic. The submersible, along with the small remotely operated vehicle named Jason Jr., conducted detailed photographic surveys and inspections of the Titanic's wreckage.



2002 ALVIN explores Alaskan seamounts

Crabs cover the sample basket on the front of ALVIN during dives near Patton Seamount in the Gulf of Alaska. ALVIN explored five large seamounts over a 400-nautical-mile section of the northeast Pacific Ocean.



2010 ALVIN investigates corals in the Gulf of Mexico

Following the explosion of the Deepwater Horizon rig and the ensuing unprecedented oil spill, ALVIN collected samples of animals and sediment to investigate the impacts the spill had on sea life.



2014 ALVIN returns to work

More than three years after its last research mission, the newly upgraded ALVIN returned to the scene of its last scientific dives in the Gulf of Mexico, as a substantially different vehicle.







# Alvin 50th Website



Woods Hole Oceanographic Institution

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## Join the Celebration

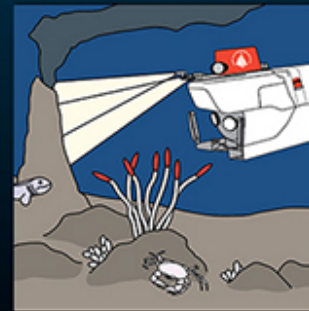
Special events and activities will help you celebrate *Alvin's* golden anniversary and learn more about deep-ocean exploration.



ALVIN GEAR



KID'S ACTIVITIES



ART GALLERY



OCEANUS MAGAZINE



WHOI EXHIBIT CENTER



ALVIN WALLPAPER




# Alvin 50th Website



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# HAPPY ALVIN WOODS HOLE OCEANOGRAPHIC INSTITUTION 50<sup>th</sup> ALVIN

For two generations, the human-occupied submersible Alvin has helped scientists expand human knowledge of the ocean and inspired countless to learn more about the ocean. This year, Alvin turns 50, and we want you to help us celebrate all summer long. [Upcoming events >](#)

[WISH ALVIN A HAPPY BIRTHDAY](#)

[Celebrate](#) [Milestones](#) [Meet Alvin](#)

SCROLL



# Alvin 50th Website



Woods Hole Oceanographic Institution

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## Wish Alvin a Happy Birthday



Help wish Alvin a happy birthday with a personalized message. Record a video of you and your friends singing "Happy Birthday" or describing what Alvin has meant to you and submit it here.

[f UPLOAD VIDEO TO FACEBOOK](#)

## Birthday Messages



SENATOR ED MARKEY



MUSEUM OF SCIENCE



NY HALL OF SCI.



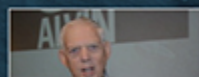
J.M. COUSTEAU



LA CITE DE LA MER



MORSE POND







Alvin 50th

# Underwater Intervention







# Alvin 50th Testimonials



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## Letters of Congratulations



GEOMAR



ISE-ISER



JAMSTEC

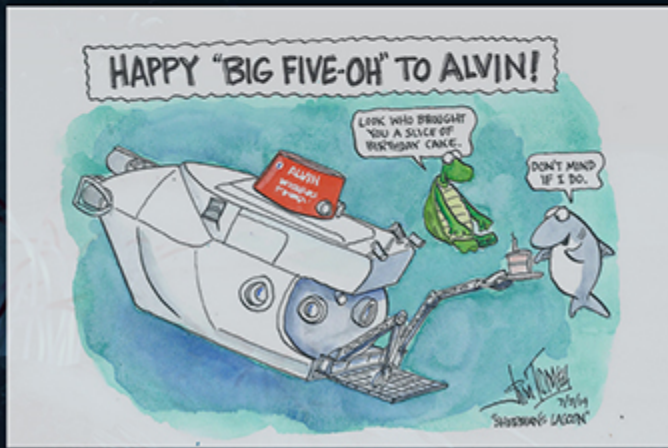


NDSC

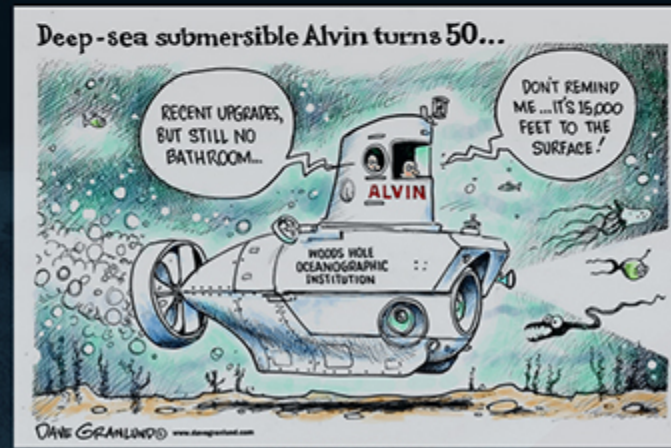


PPSIO

## Cartoons



JIM TOOMEY



DAVE GRANLUND



# Alvin 50th WHOI Event







Alvin 50th

# Washington DC Event

